


ZS-M50

SERVICE MANUAL

Ver 1.3 2004.09
With SUPPLEMENT 1
(9-924-996-86)

AEP Model
UK Model
Tourist Model



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MD Section	Model Name Using Similar Mechanism	NEW
	MD Mechanism Type	MDM-3Z
	Optical Pick-up Type	KMS-260A
CD Section	Model Name Using Similar Mechanism	CFD-S27
	CD Mechanism Type	KSM-213CDM
	Optical Pick-up Type	KSS-213C

SPECIFICATIONS

CD player section

System

Compact disc digital audio system

Laser diode properties

Material: GaAlAs

Wave length: 785 nm

Emission duration: Continuous

Laser output: Less than 44.6 μ W

(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

Spindle speed

200 r/min (rpm) to 500 r/min (rpm) (CLV)

Number of programme positions

2

Frequency response

20 - 20,000 Hz $\pm 1/-2$ dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM: 87.5 - 108 MHz

MW: 531 - 1,602 kHz

LW: 153 - 279 kHz

IF

FM: 10.7 MHz

MW/LW: 450 kHz

Aerials

FM: Telescopic aerial

External aerial terminal

MW/LW: External aerial terminals

MD player section

System

Minidisc digital audio system

Disc

MiniDisc

Laser diode properties

Material: GaAlAs

Wave length: 785 nm

Emission duration: Continuous

Laser output: Less than 44.6 μ W

(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

Recording/playback time

Maximum 74 minutes (with MDW-74)

Revolutions

400 rpm to 900 rpm (CLV)

Error correction

Advanced Cross Interleave Reed Solomon Code (ACIRC)

Sampling frequency

44.1 kHz

Coding

Adaptive TTransform Acoustic Coding (ATRAC)

Modulation system

EFM (Eight-to-Fourteen Modulation)

Number of programme positions

2 stereo programme positions

— Continued on page 2 —

PERSONAL MINIDISC SYSTEM

9-924-996-13

2004I02-1

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Sony Corporation

Personal Audio Company

Published by Sony Engineering Corporation

SONY®

Frequency response
20 - 20,000 Hz +1/-2 dB
Signal-to-noise ratio
Over 80 dB (during playback)
Wow and flutter
Below measurable limit

General

Speaker
Full-range : 8 cm (3 in.) dia., 4 ohms cone type (2)

Inputs
LINE IN (stereo minijack): Sensitivity 436 mV/
870 mV

Outputs
Headphones jack (stereo minijack) (1):
For 32 ohms impedance headphones

Maximum power output
7 W + 7 W

Power requirements
For personal minidisc system:
230 V AC, 50 Hz
For back-up memory:
4.5 V DC, 3 R6 (size AA) batteries
For remote controller:
3 V DC, 2 R6 (size AA) batteries

Power consumption
32 W

Dimensions (incl.projecting parts)
approx. 450 × 164 × 239.4 mm (w/h/d)
(17 3/4 × 6 1/2 × 9 1/2 inches)

Mass
approx. 6 kg (13 lb. 4 oz)

Supplied accessories
Mains lead (1)
Remote controller (1)
MW/LW loop aerial (1)

Design and specifications are subject to change without notice.

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SECTION 1 SERVICE NOTE

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION.

REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

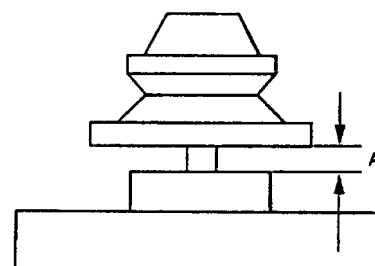
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Close the lid for CD.
2. Press CD \triangleright button.
3. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
Objective lens moves up and down once for the focus search.

CAUTION DURING WHEN MOUNTING THE PULLEY FOR THE CD DOOR MOTOR (M703)

Make the following adjustment when mounting the CD door motor (part number : 1-763-224-11) and motor pulley (part number : 2-627-174-01) of the CD section.

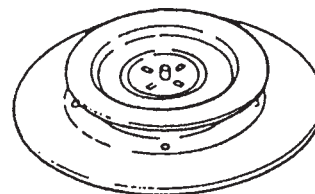


Specification : $A = 0.9$ to 1.1mm

CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

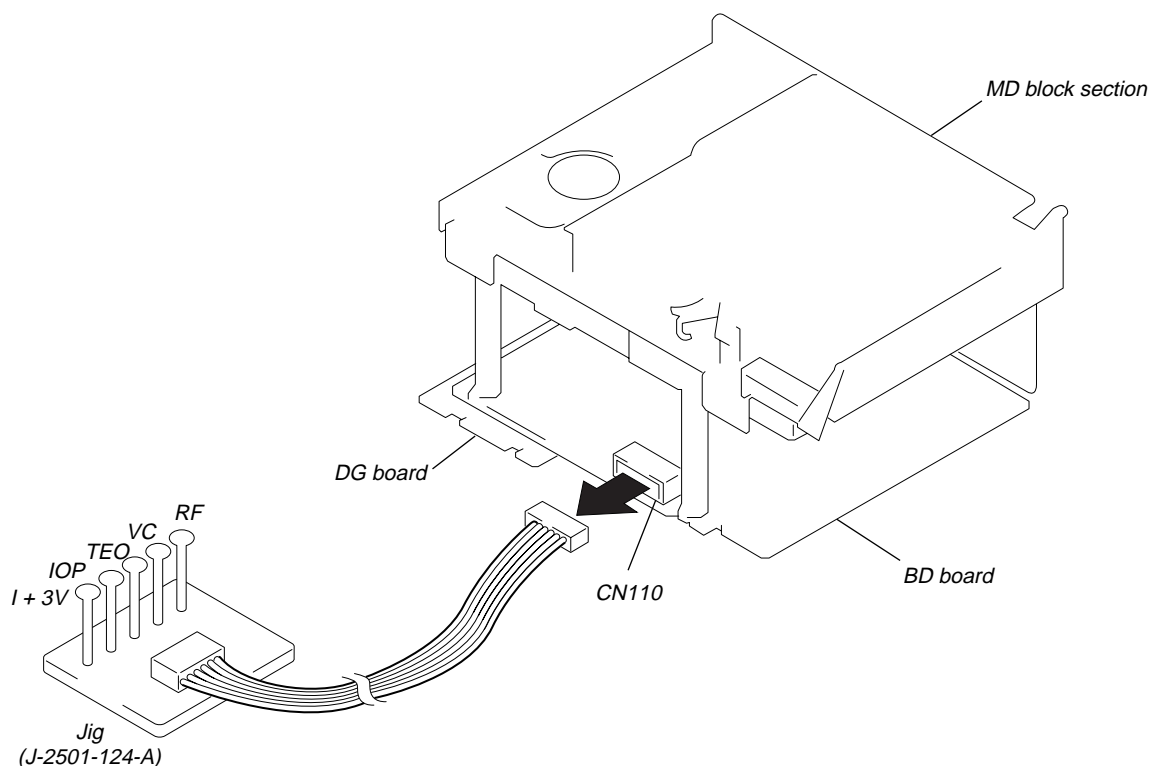
- Code number of Chuck Plate Jig : X-4918-255-1



ABOUT THE BD BOARD WAVEFORM CHECKING JIG

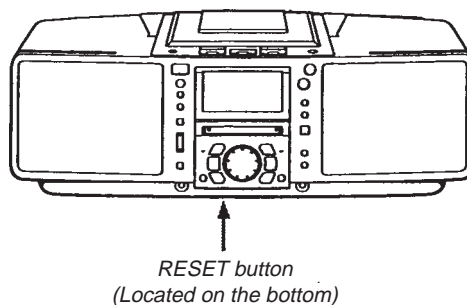
The special jig (J-2501-124-A) is highly convenient when checking the waveform of the BD board of the MD section. Pin names and items to check are as follows:

- I+3V : for IOP measurement (check for depleted optical pickup laser)
- IOP : for IOP measurement (check for depleted optical pickup laser)
- TEO : TRK error signal (traverse adjustment)
- VC : Standard level for checking signals
- RF : RF signal (jitter check)



ABOUT THE HARDWARE RESET

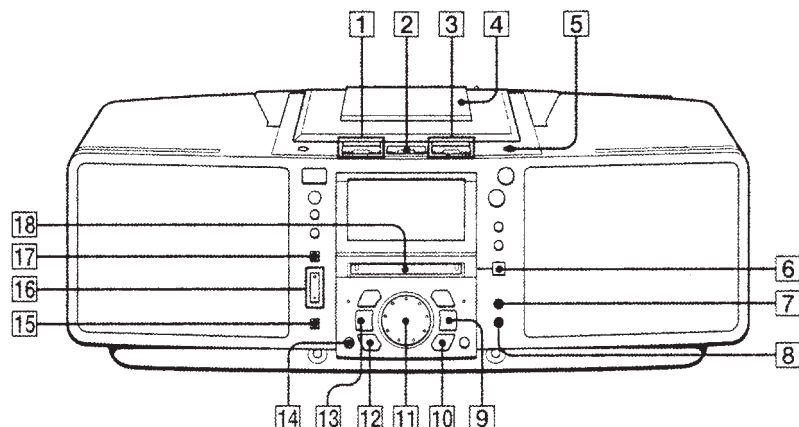
It is possible to reset the system microcomputer by pressing the RESET button located on the bottom with a pointed object. Use this button when the unit cannot be operated properly due to such problems as microcomputer errors, etc.



SECTION 2 GENERAL

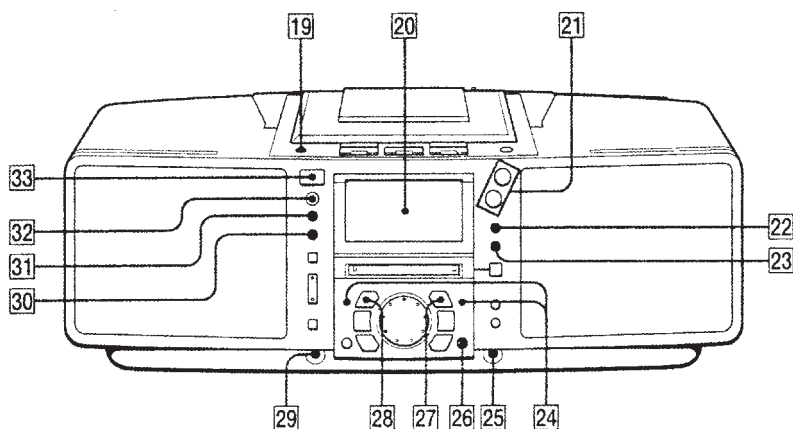
LOCATION AND FUNCTION OF CONTROLS

FRONT PANEL: MD/CD/RADIO Section



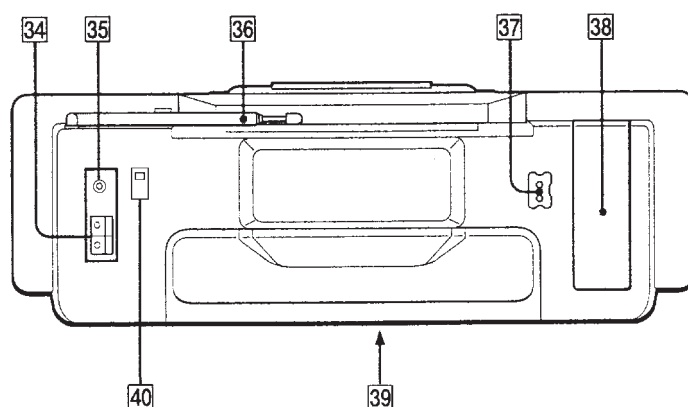
- | | |
|--|------------------------------------|
| 1 MD operation buttons
▷ (play/pause)
□ (stop) | 10 YES, ENTER button |
| 2 BAND button | 11 Jog dial
◀◀/▶▶ AMS
PRESET |
| 3 CD operation buttons
▷ (play/pause)
□ (stop) | 12 NO, CANCEL button |
| 4 CD lid | 13 TUNE -, ⇄, ◀◀ button |
| 5 ▲ CD OPEN/CLOSE button | 14 EDIT button |
| 6 ▲ MD EJECT button | 15 REC button |
| 7 MONO/ST, REPEAT button | 16 REC IT button
TO TOP, TO END |
| 8 AUTO PRESET/RDS/SHUF/PGM button | 17 SYNCHRO REC
CD ► MD button |
| 9 TUNE +, ⇄, ►► button | 18 MD insert section |

FRONT PANEL: TIMER, COM Section



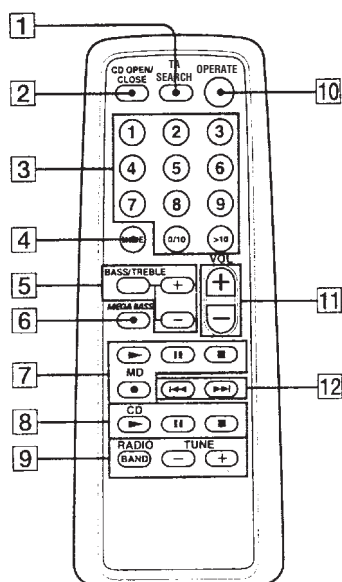
- | | |
|---|---|
| 19 LINE/LINE LEVEL button | 26 DISPLAY button |
| 20 Display window | 27 INSERT/TIMER button |
| 21 VOLUME +, - buttons | 28 DELETE/CLOCK button |
| 22 BASS/TREBLE button | 29 (Headphones) Jack (stereo mini jack) |
| 23 MEGA BASS button | 30 STANDBY button |
| 24 Jog dial Function indicator
AMS/PRESET SELECT | 31 SLEEP button |
| 25 LINE IN terminal | 32 Remote control receiver section |
| | 33 OPERATE button |

REAR PANEL Section



- 34 MW/LW ANTENNA terminal
- 35 FM EXT ANTENNA terminal
- 36 FM rod antenna
- 37 ~ AC IN jack
- 38 Battery compartment (for memory back-up)
- 39 RESET button (bottom)
- 40 FM ANTENNA SELECTOR switch

REMOTE CONTROL Section

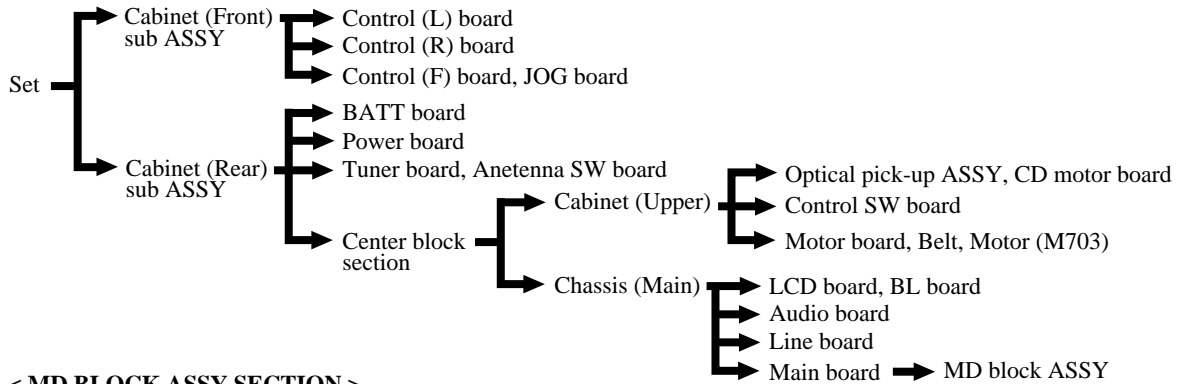


- 1 TA SERCH button
- 2 CD OPEN/CLOSE button
- 3 Numeric buttons
- 4 MODE button
- 5 BASS/TREBLE +, - buttons
- 6 MEGA BASS button
- 7 MD operation buttons
 - ▶ (play)
 - ⏸ (pause)
 - (stop)
 - (rec)
- 8 CD operation buttons
 - ▶ (play)
 - ⏸ (pause)
 - (stop)
- 9 RADIO operation buttons
 - BAND
 - TUNE -, +
- 10 OPERATE button
- 11 VOL +, - buttons
- 12 ◀◀, ▶▶ AMS, select, search buttons

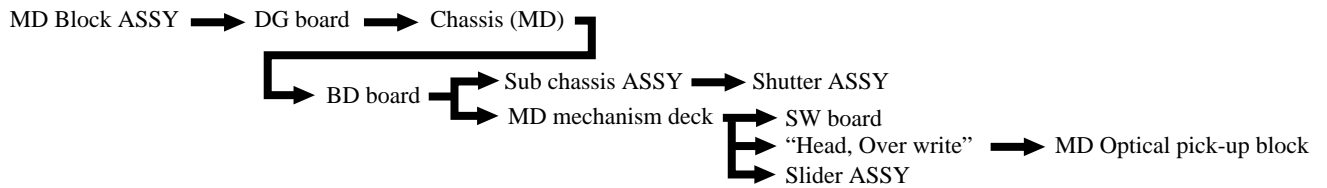
SECTION 3 DISASSEMBLY

- The equipment can be removed using the following procedure.

< MAIN BLOCK SECTION >



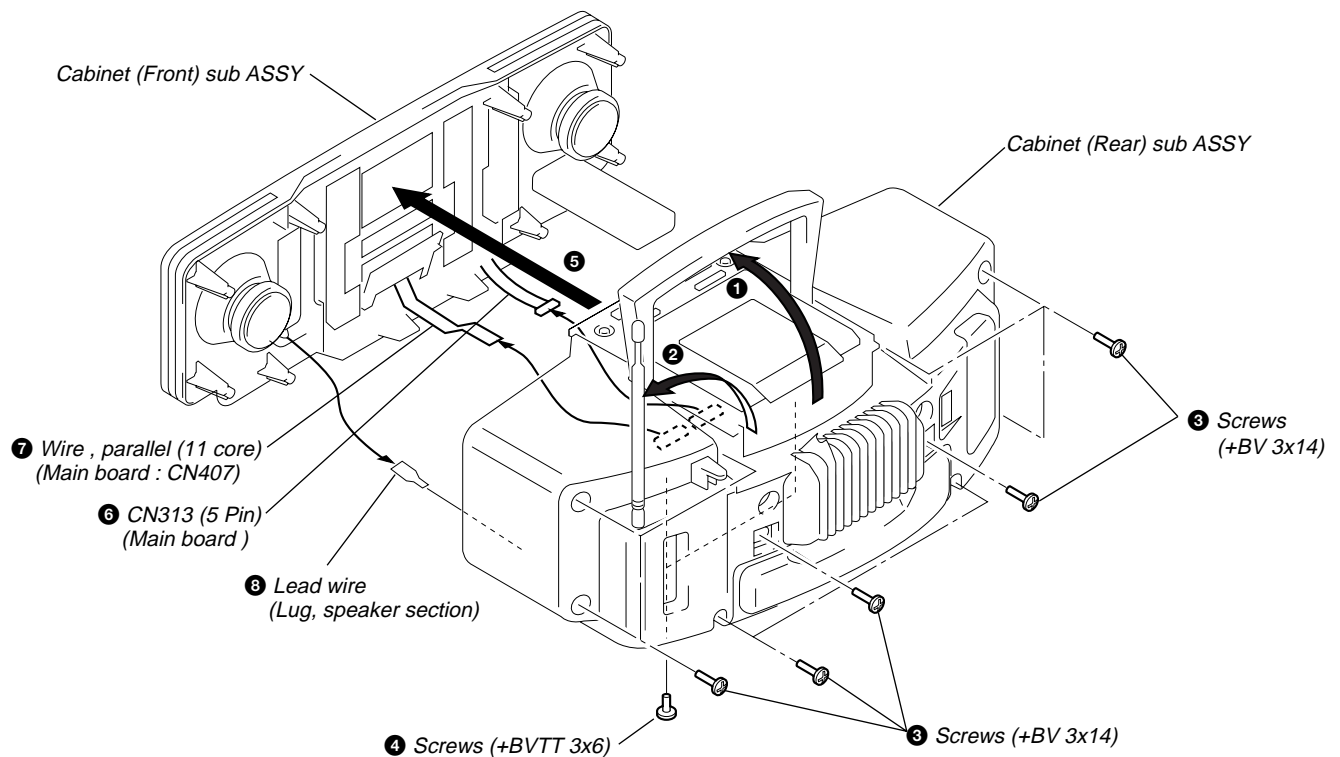
< MD BLOCK ASSY SECTION >



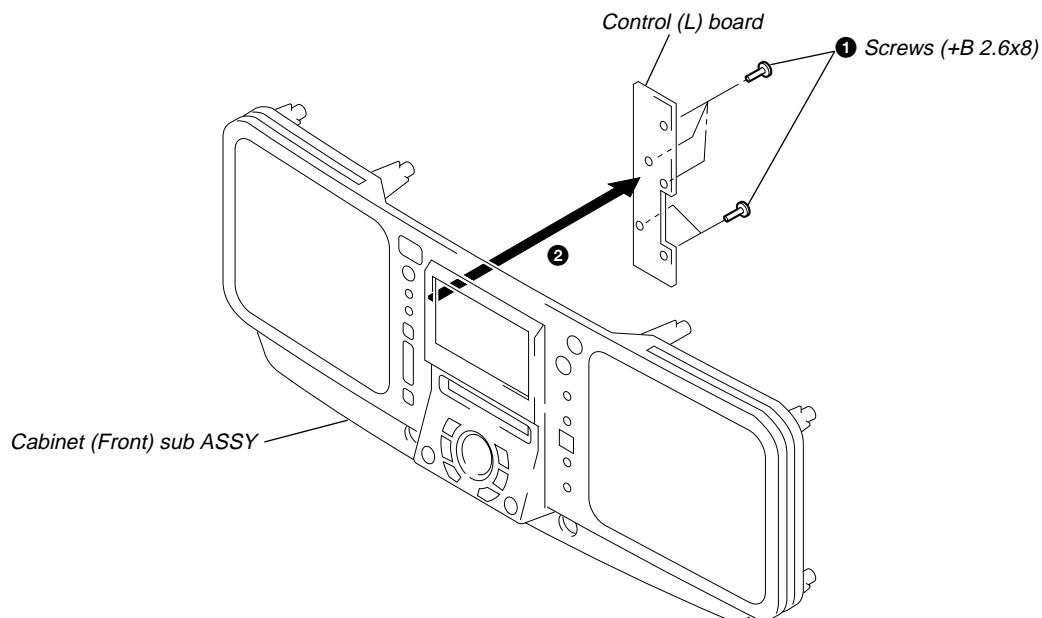
Note : Follow the disassembly procedure in the numerical order given.

<MAIN BLOCK SECTION>

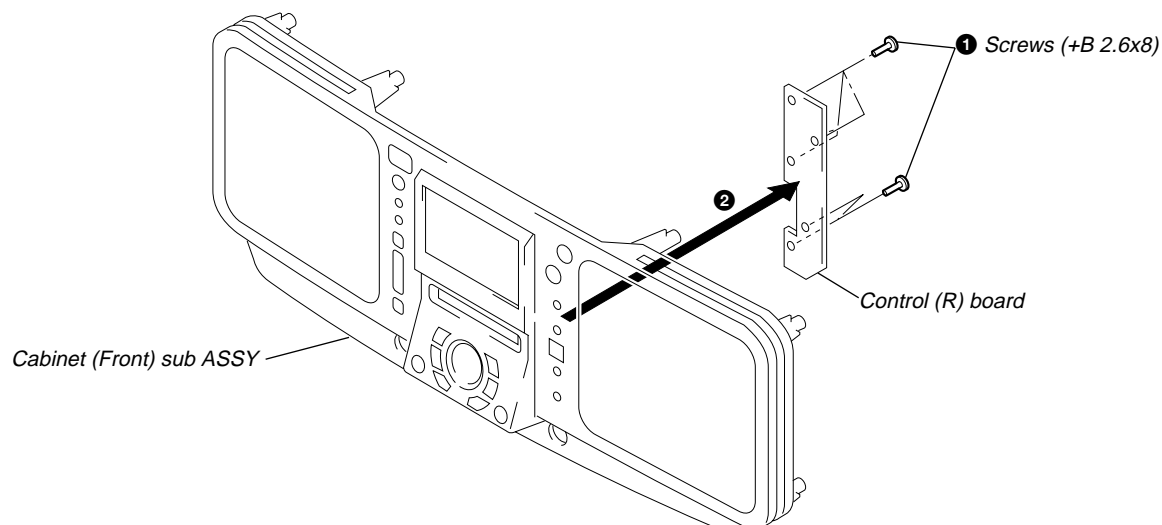
3-1. CABINET (FRONT) SUB ASSY, CABINET (REAR) SUB ASSY



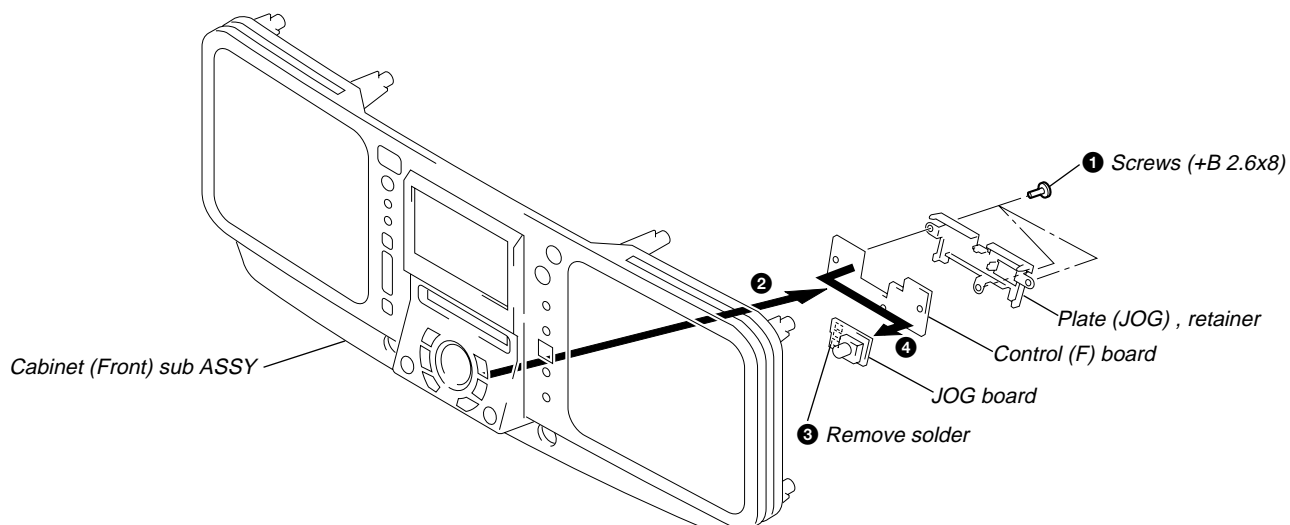
3-2. CONTROL (L) BOARD



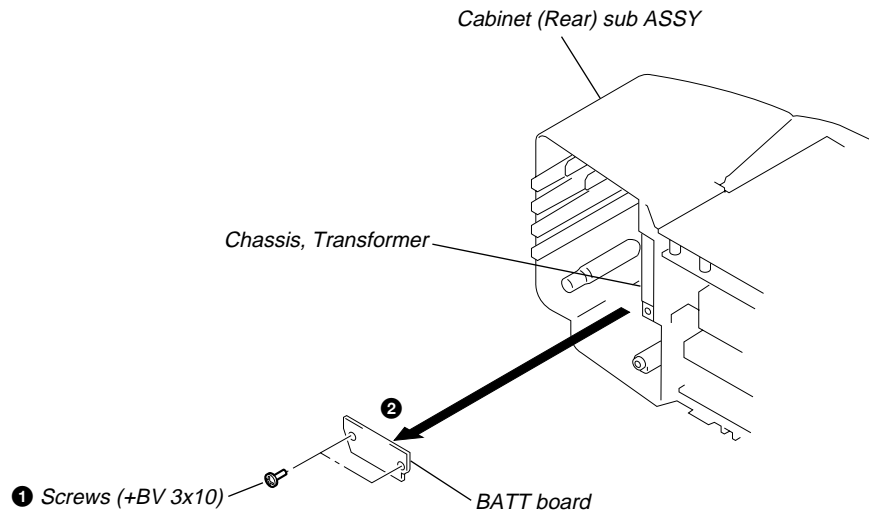
3-3. CONTROL (R) BOARD



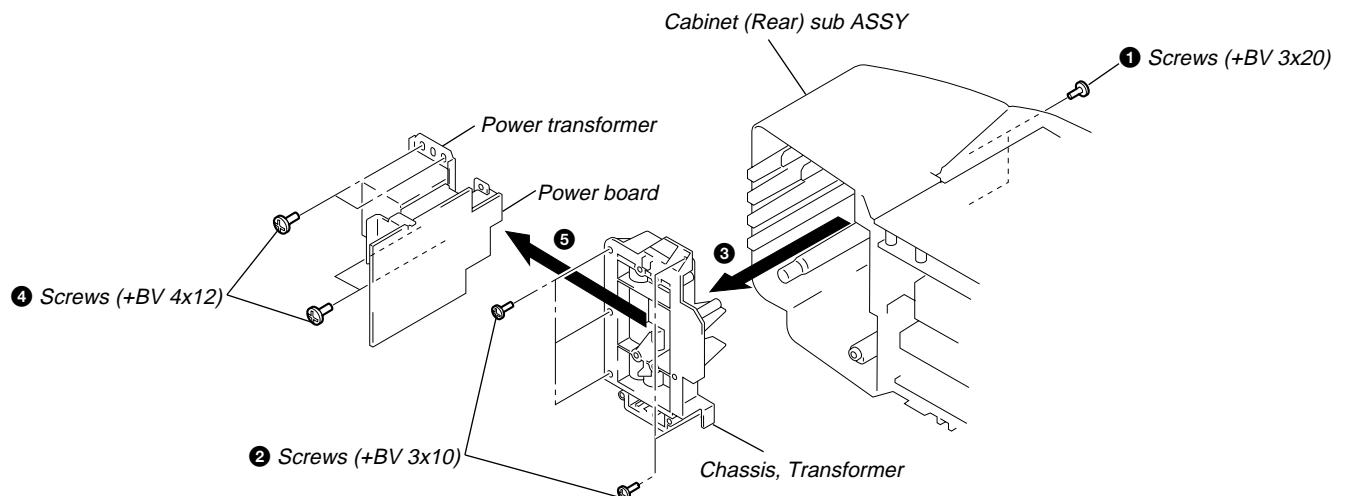
3-4. CONTROL (F) BOARD, JOG BOARD



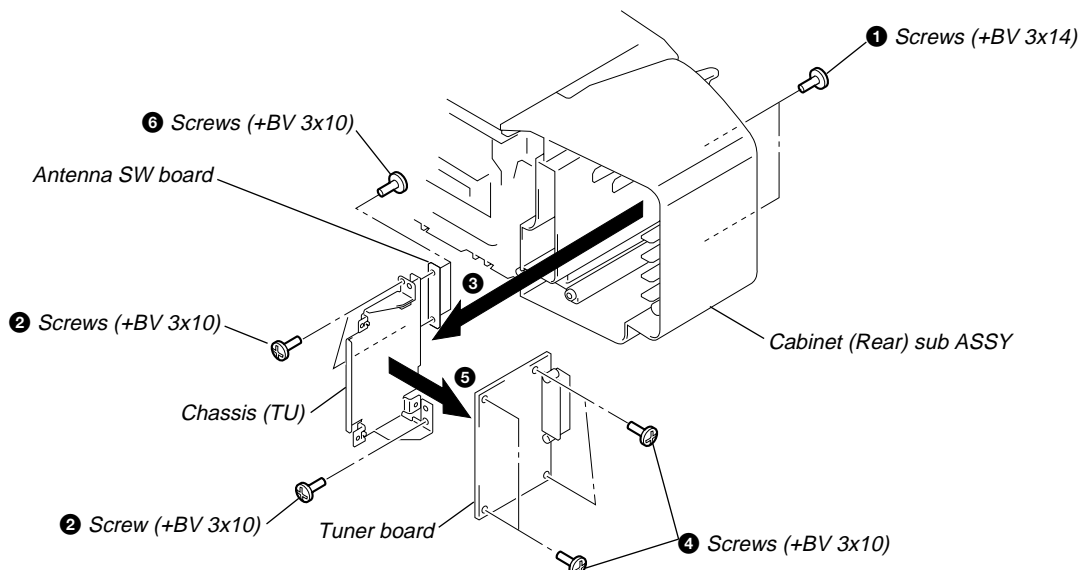
3-5. BATT BOARD



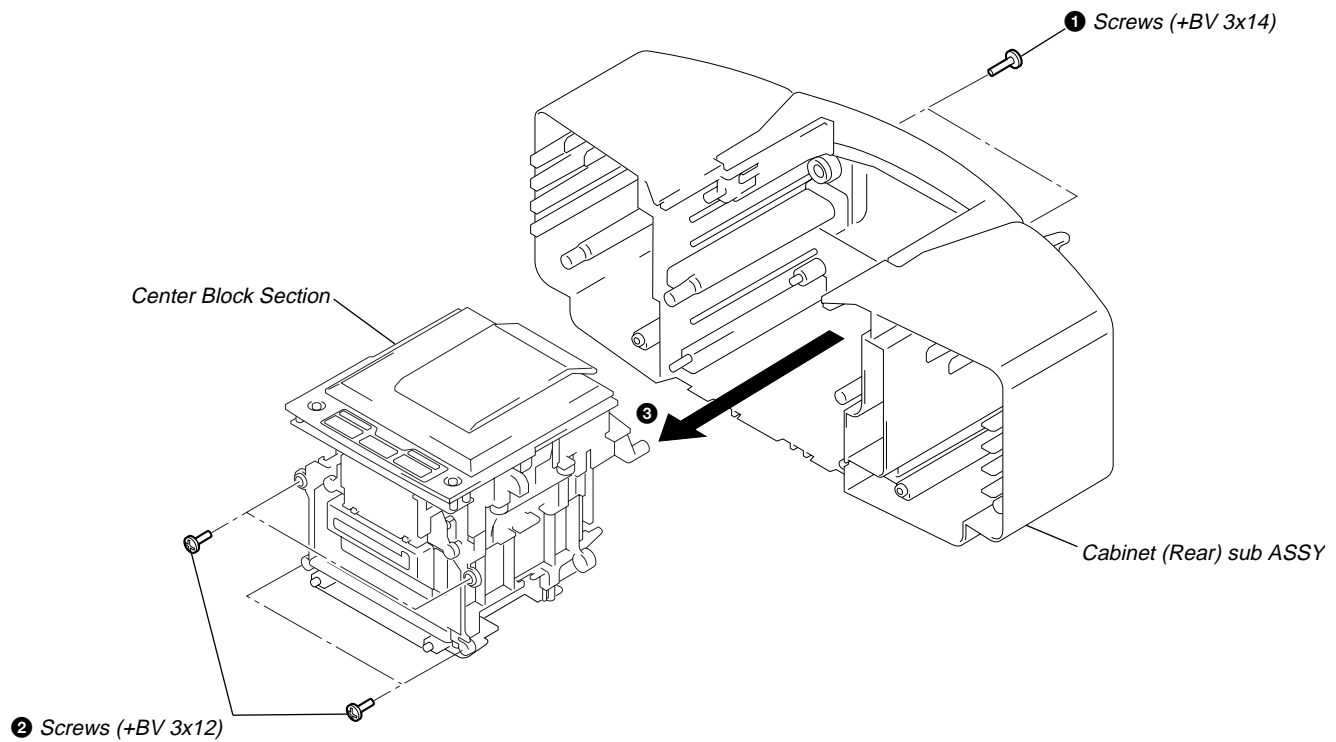
3-6. POWER BOARD



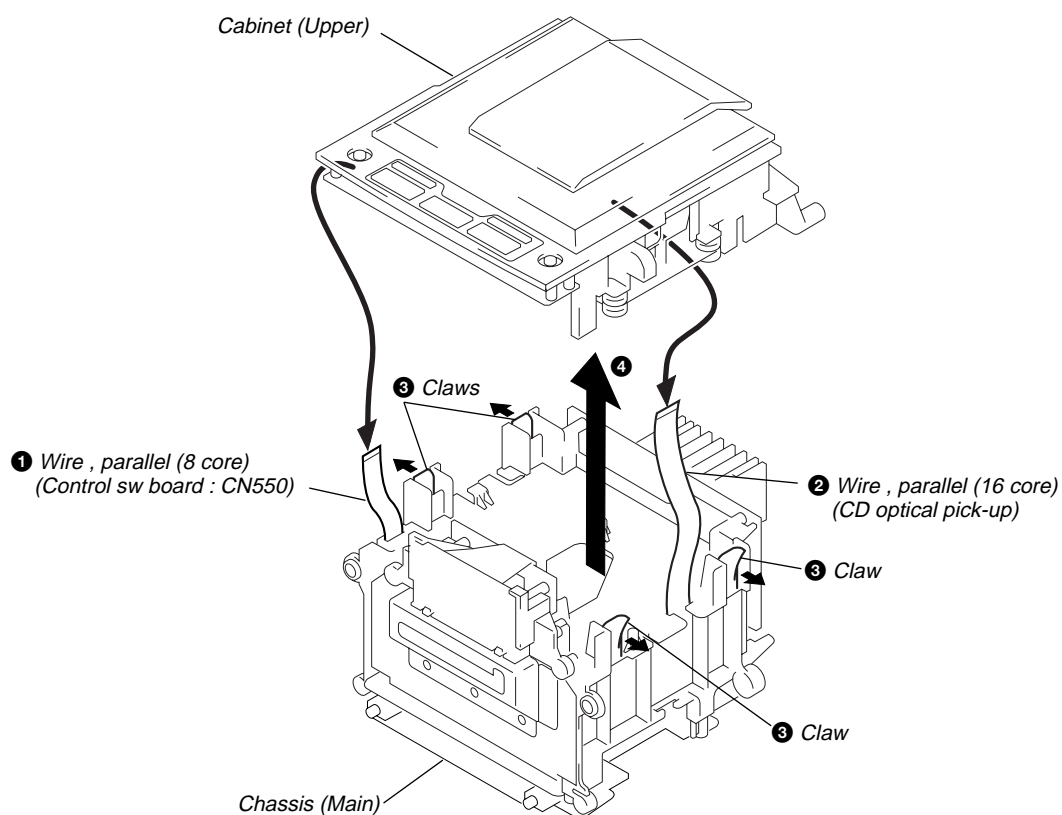
3-7. TUNER BOARD, ANTENNA SW BOARD



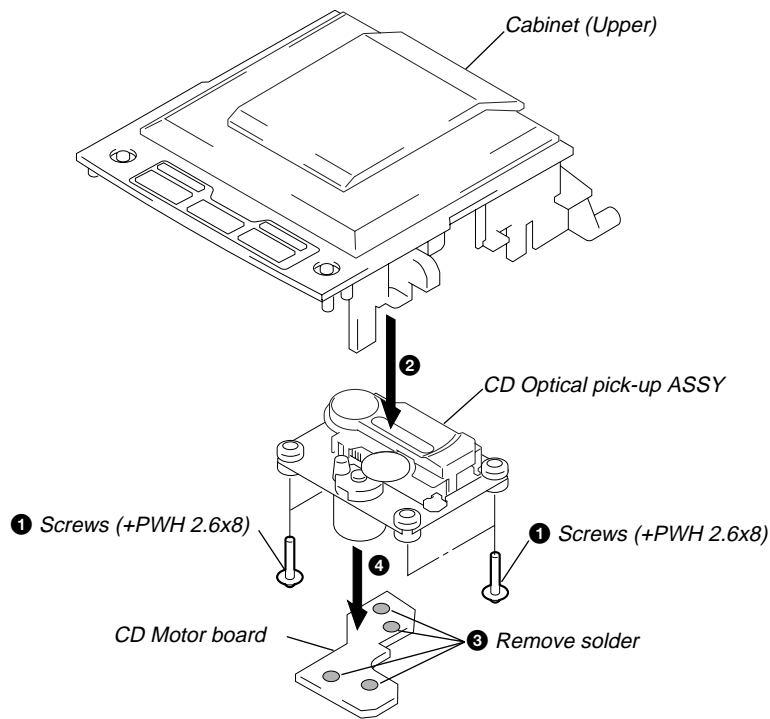
3-8. CENTER BLOCK SECTION



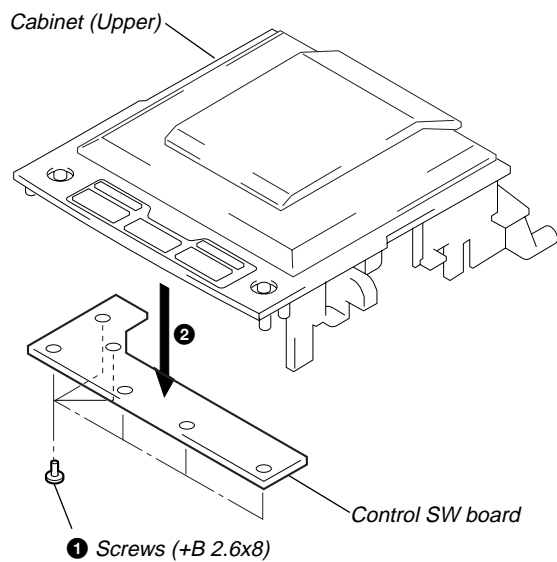
3-9. CABINET (UPPER), CHASSIS (MAIN)



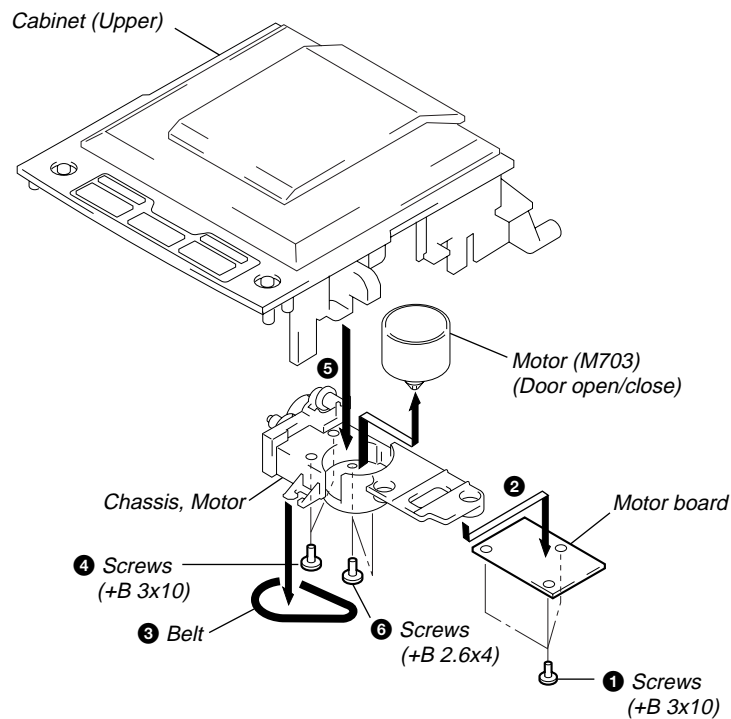
3-10. OPTICAL PICK-UP ASSY, CD MOTOR BOARD



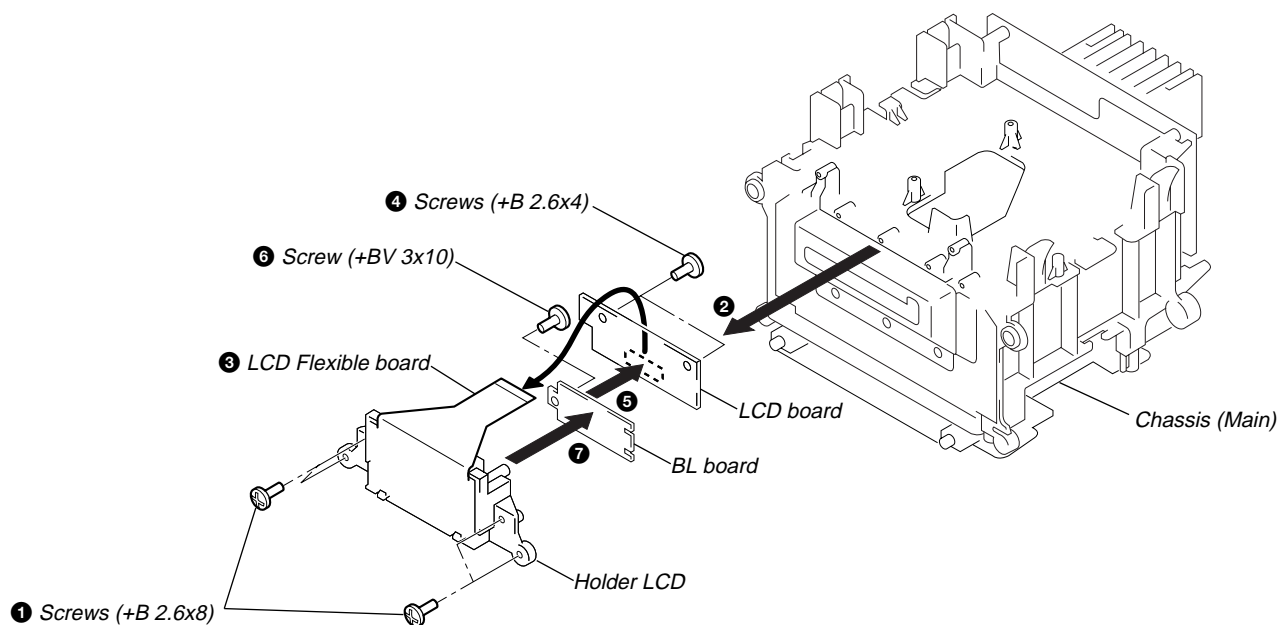
3-11. CONTROL SW BOARD



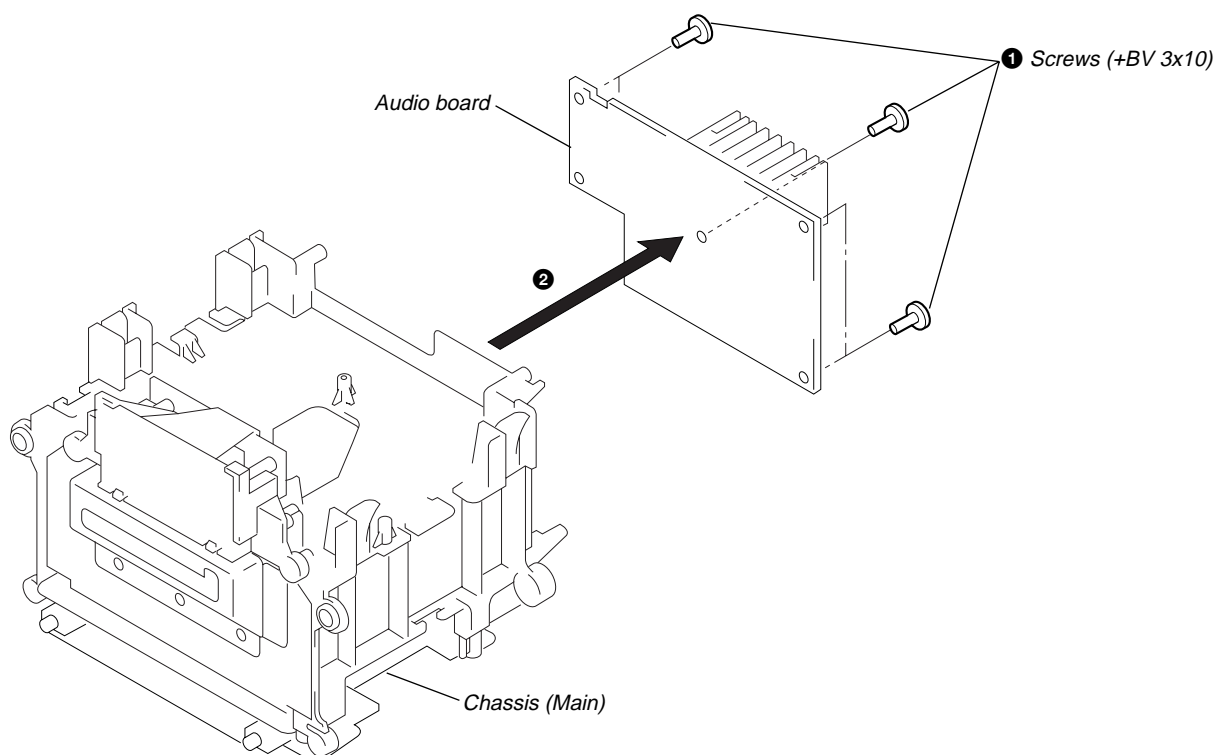
3-12. MOTOR BOARD, BELT, MOTOR (M703)



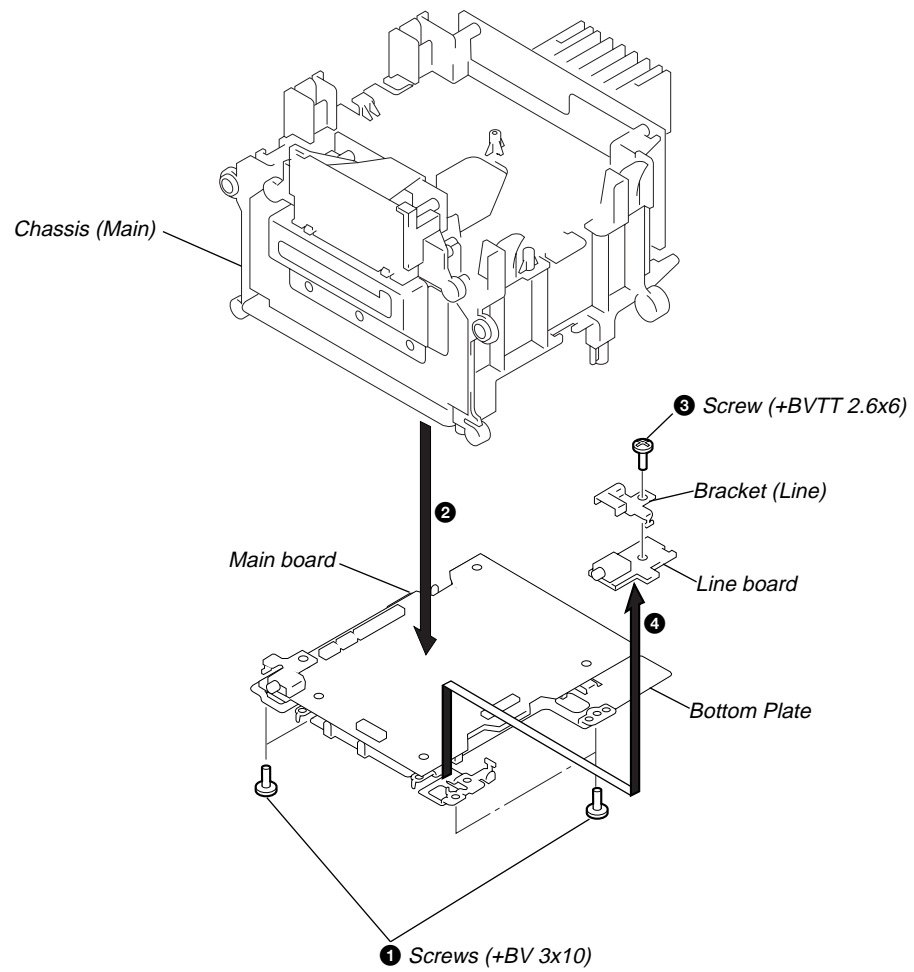
3-13. LCD BOARD, BL BOARD



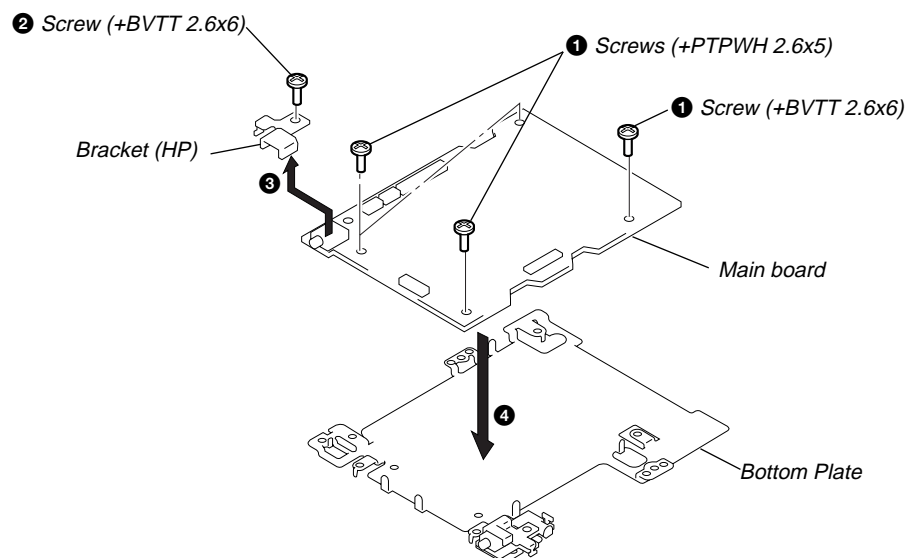
3-14. AUDIO BOARD



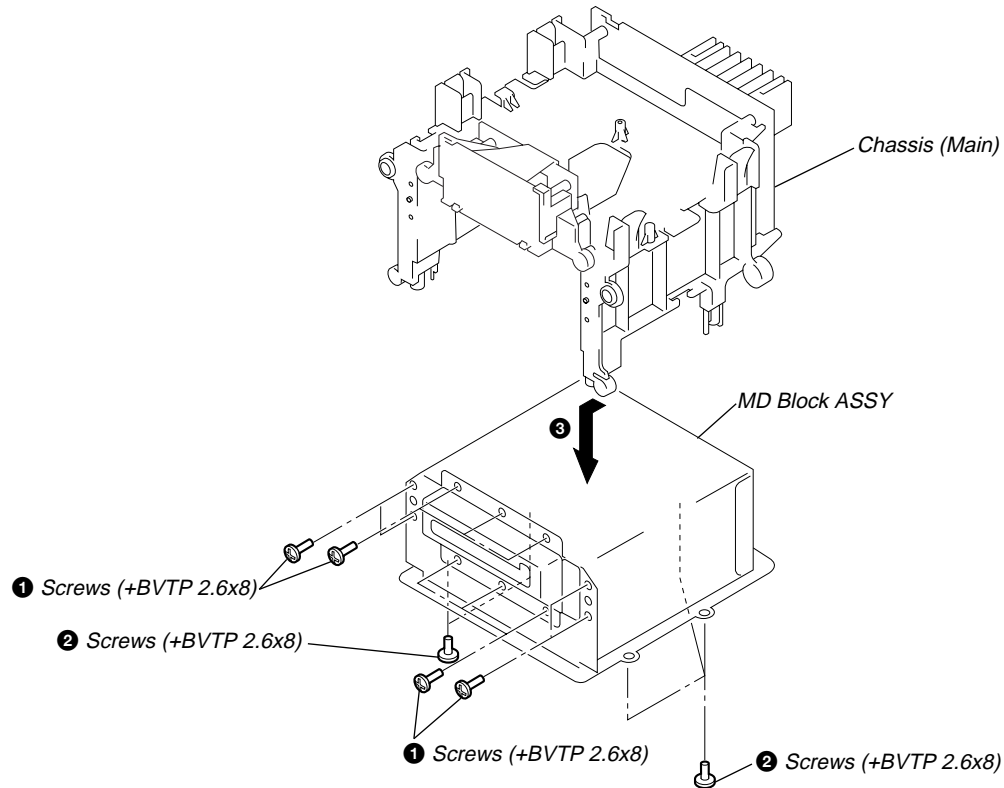
3-15. LINE BOARD



3-16. MAIN BOARD

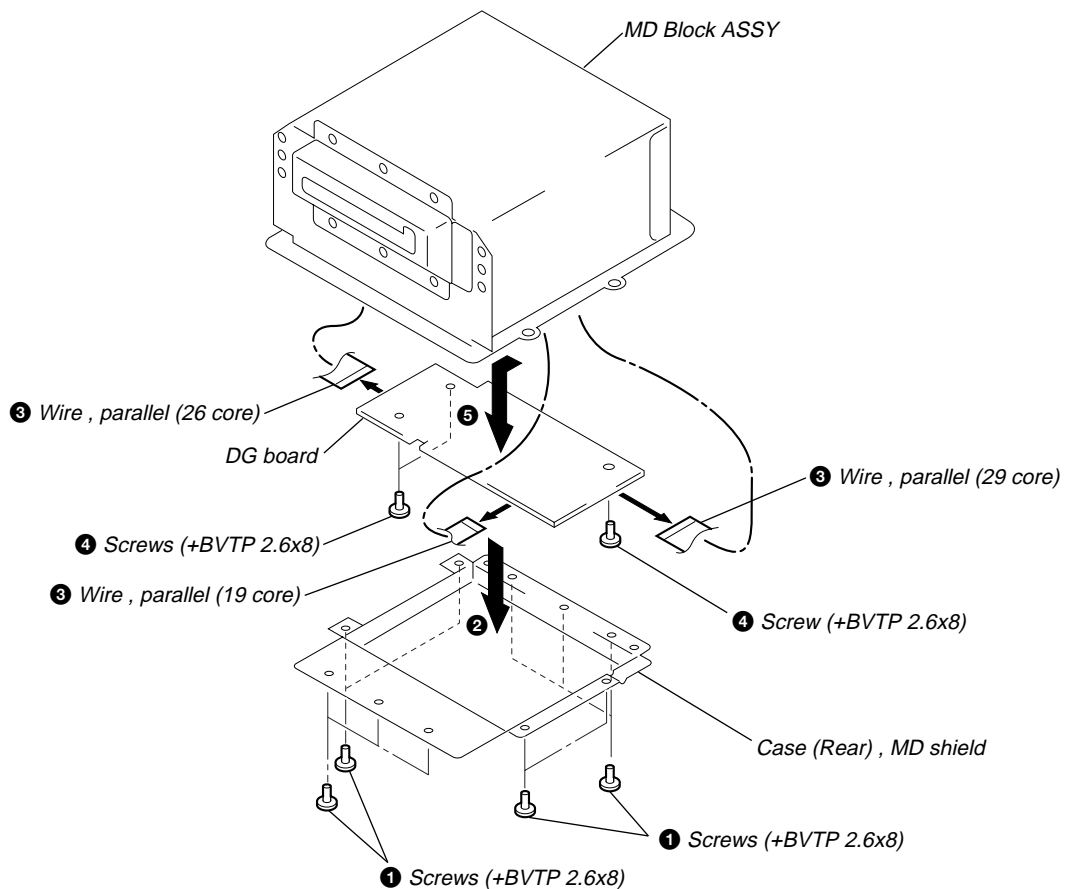


3-17. MD BLOCK ASSY

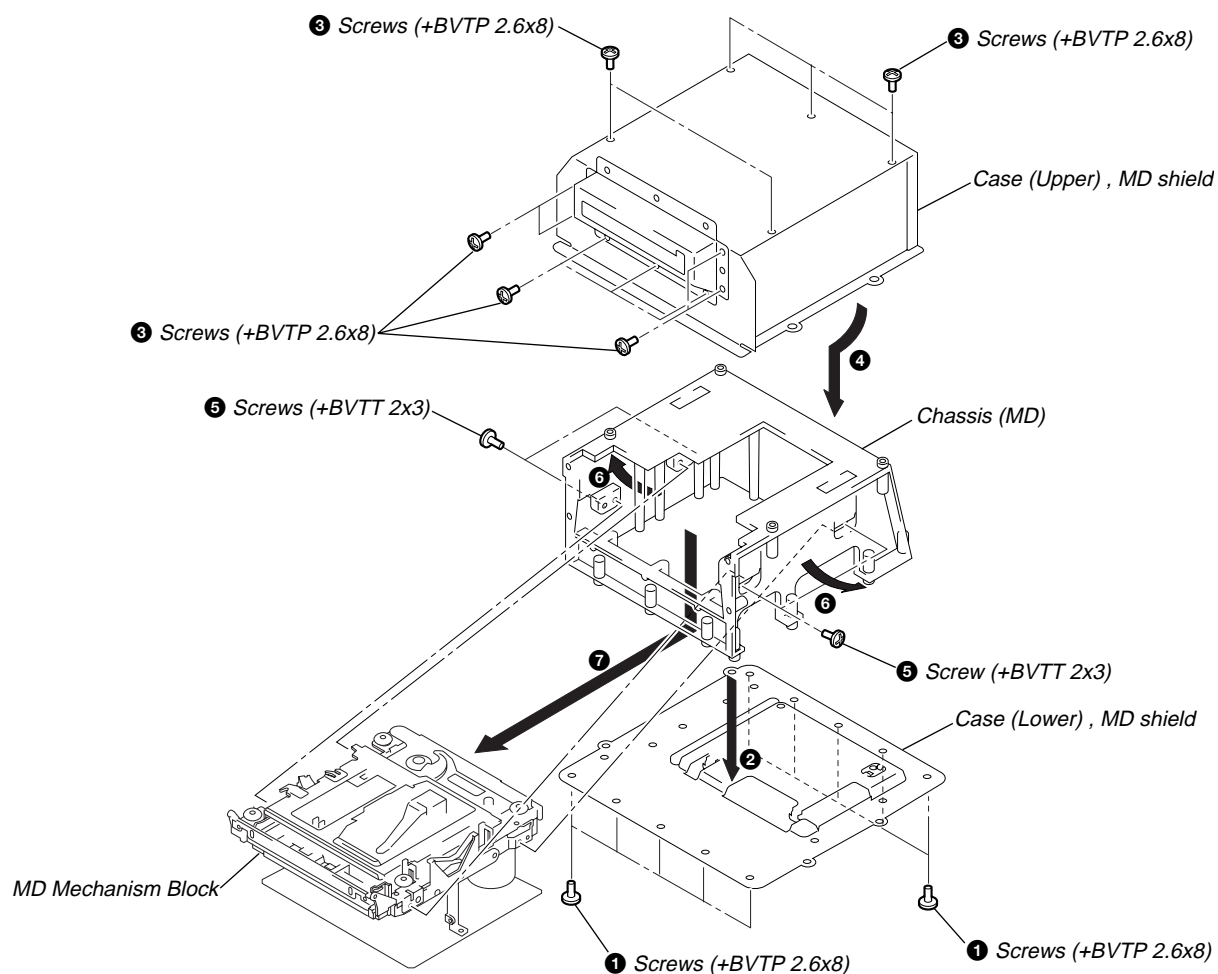


<MD BLOCK ASSY SECTION>

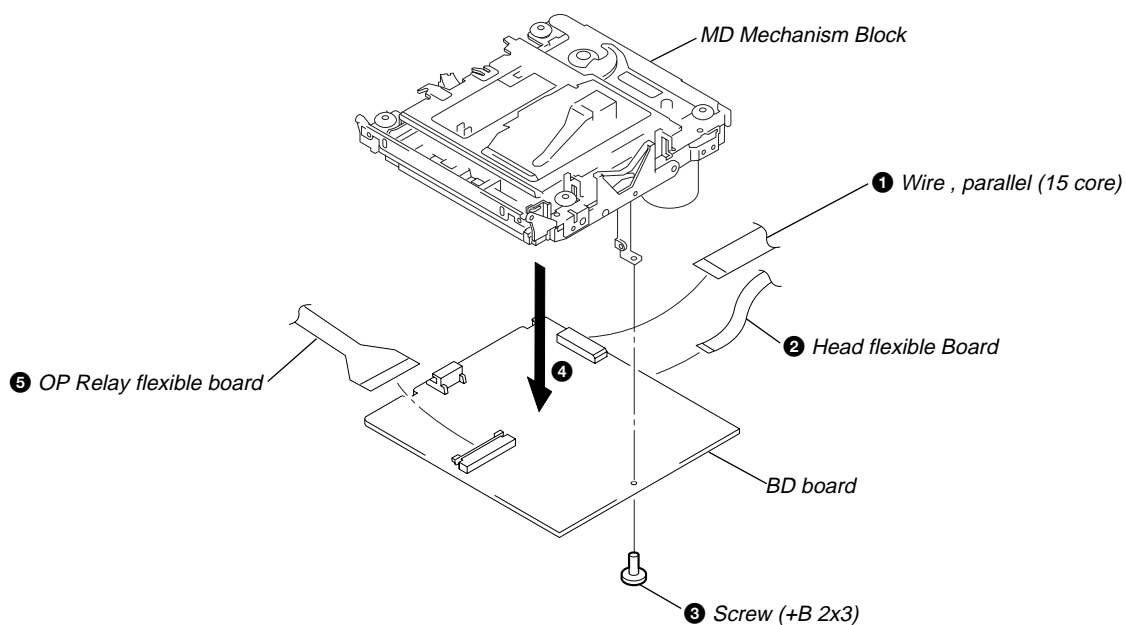
3-18. DG BOARD



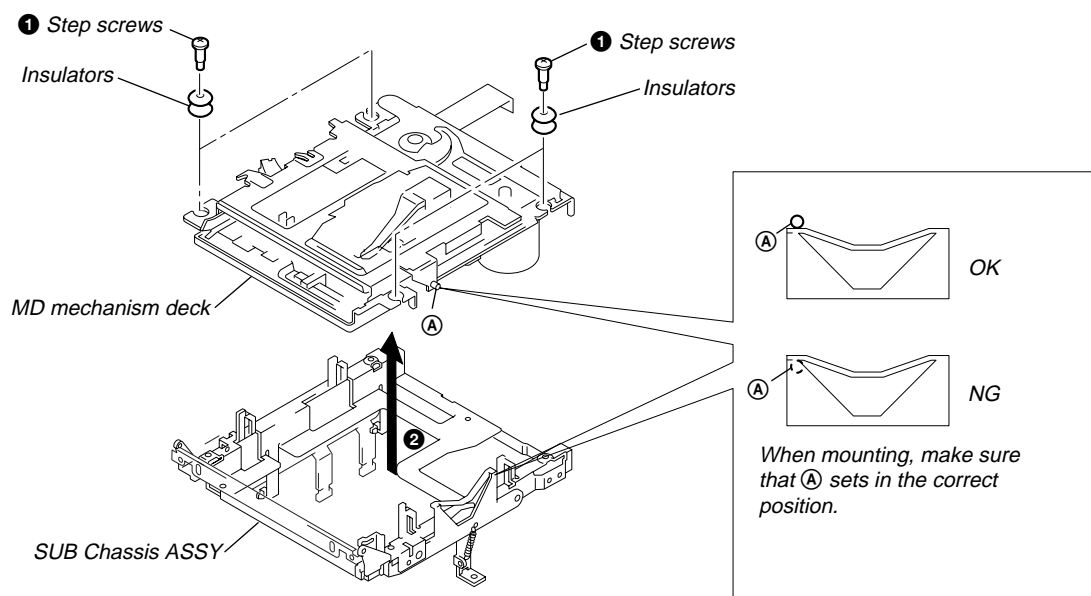
3-19. CHASSIS (MD)



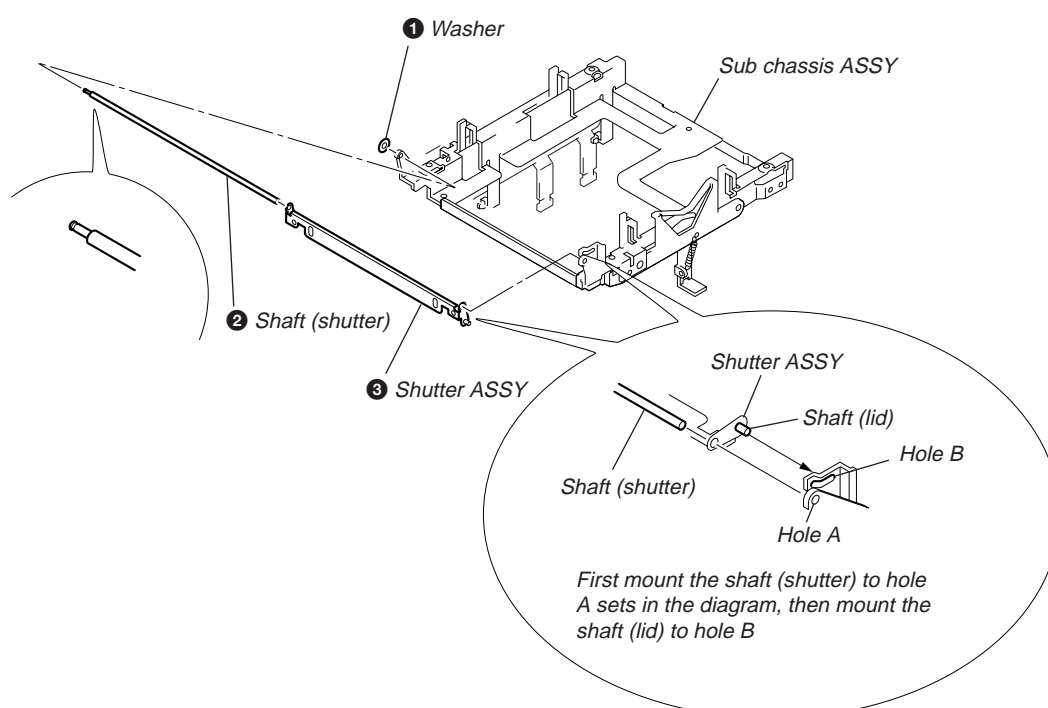
3-20. BD BOARD



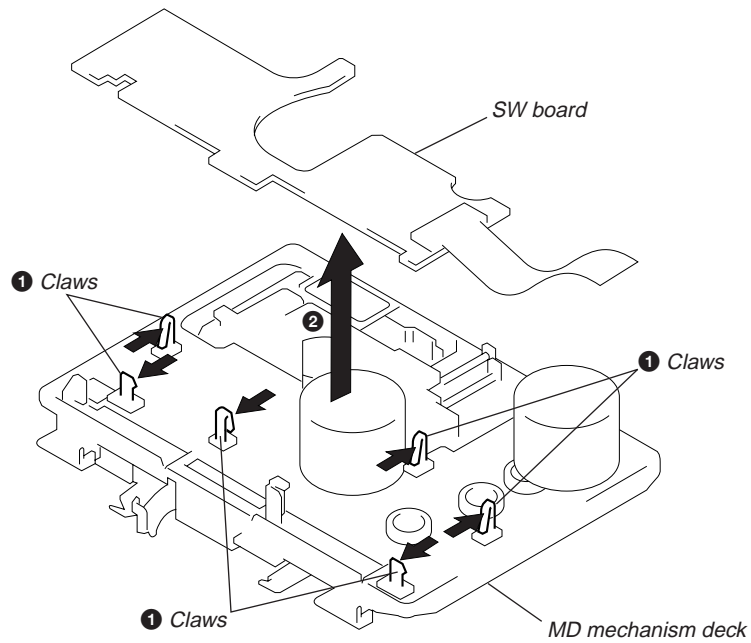
3-21. SUB CHASSIS ASSY, MD MECHANISM DECK



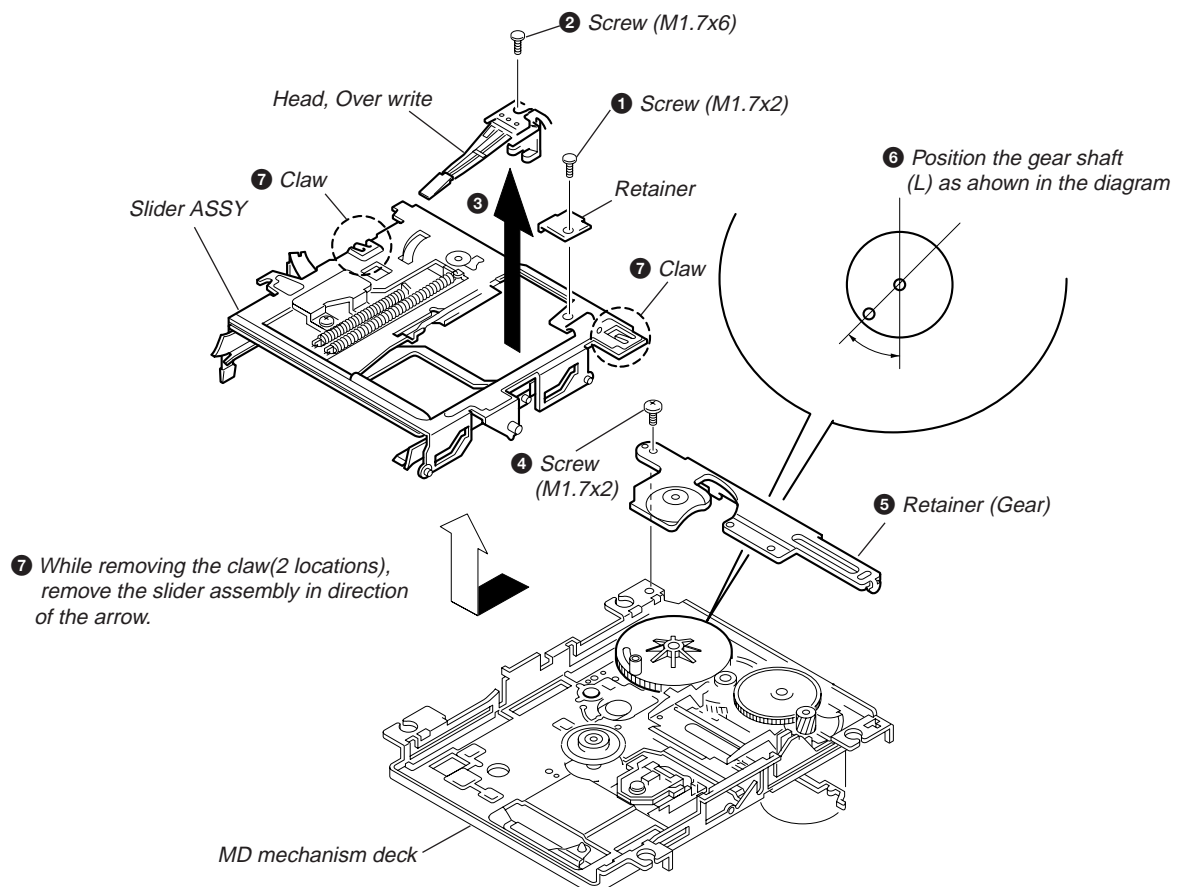
3-22. SHUTTER ASSY



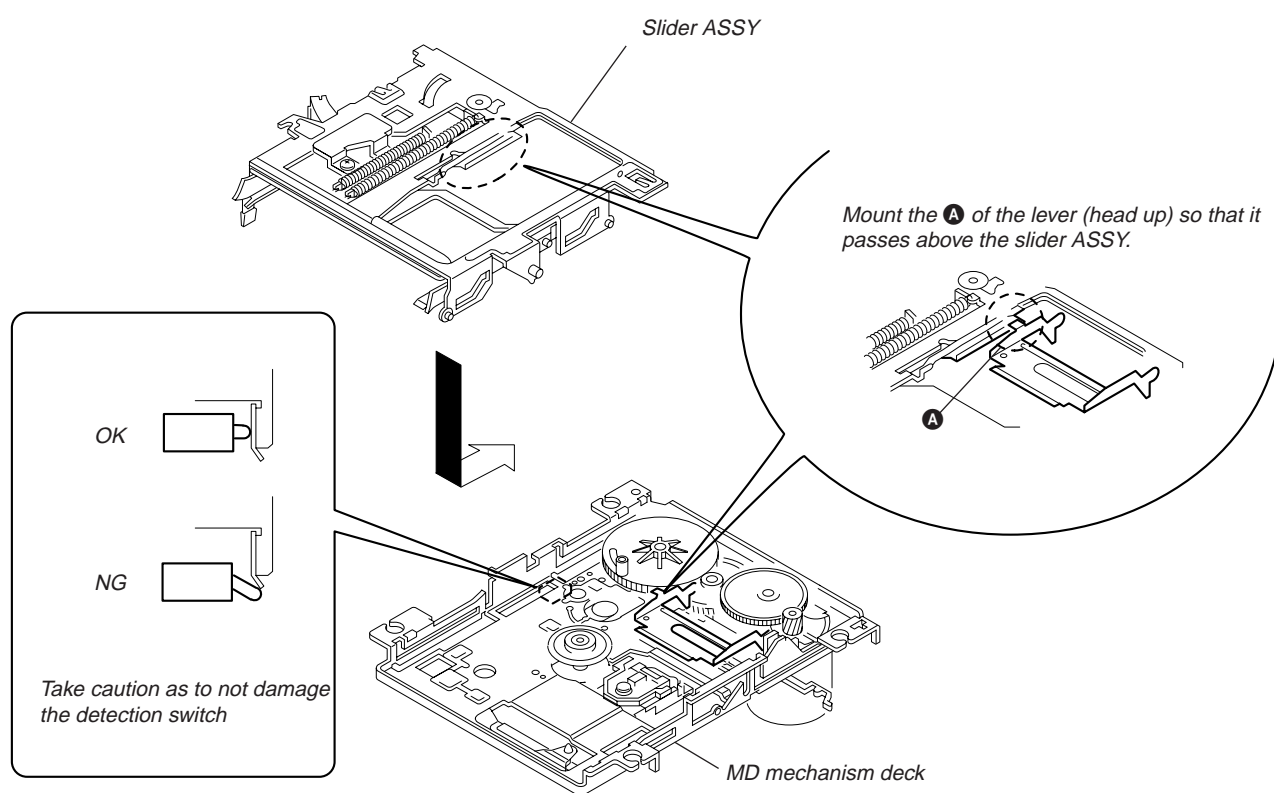
3-23. SW BOARD



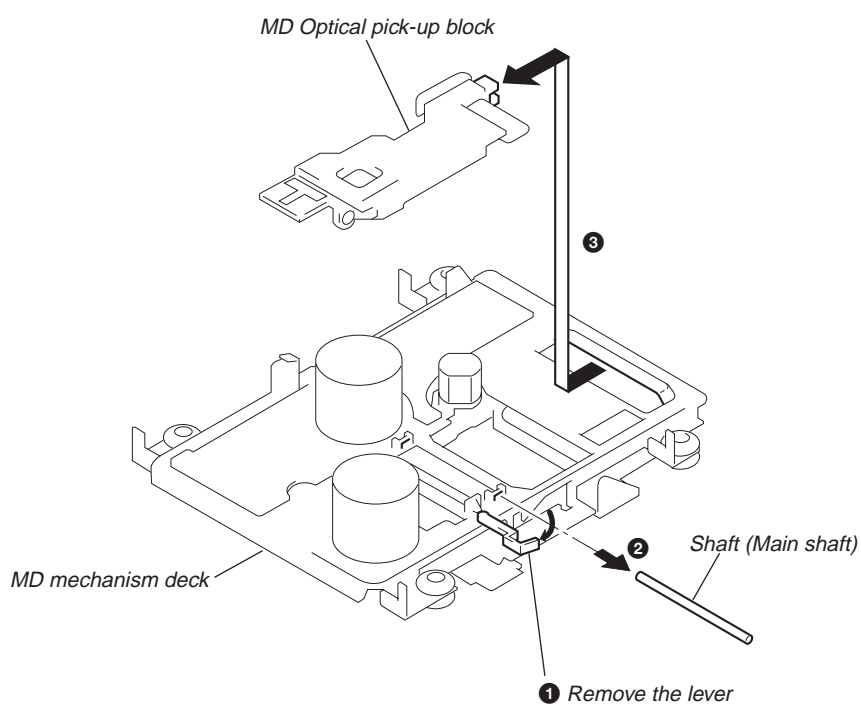
3-24. “ HEAD, OVER WRITE ”, SLIDER ASSY



● CAUTION DURING SLIDER ASSY ASSEMBLY



3-25. MD OPTICAL PICK-UP BLOCK



SECTION 4

TEST MODE

4-1. CAUTIONS WHEN USING THE TEST MODE

- ① Check to make sure the inserted disk is completely stopped before removing since loading related operations will operate regardless of the Test mode operation.
The rotation of the inserted disk will not stop even when pressing the MD EJECT button during continuous playback and continuous recording.
In this case, the disk will be ejected while still in motion.
Always press the NO/CANCEL button and check to see that the disk has stopped turning before pressing the MD EJECT button.
- ② In the Test mode, detection of the write-protect tab is not executed. For this reason, pressing the REC button in modes where the recording laser is emitted (see 4-1-1) will delete the recorded contents regardless of the tab position. When using a disk in the Test mode which its contents must not be deleted, avoid entering the Continuous Recording mode and Traverse Adjustment mode.

4-1-1. Modes which the record laser is emitted and button operations

- Continuous Recording mode (CREC MODE)
- Traverse Adjustment mode (EFBAL ADJUST)
- Laser Power Adjustment mode (LDPWR ADJUST)
- Laser Power Check mode (LDPWR CHECK)
- Traverse (MO) check (EF MO CHECK)
- Traverse (MO) adjustment (EF MO ADJUST)
- When pressing the REC button

4-2. TEST MODE SETTINGS

MD Test mode :

Press and hold the EDIT button and BASS/TREBLE button, then press MD ►|| → MD ■ → MD ►|| → MD ■.

CD Test mode :

Press and hold the EDIT button and BASS/TREBLE button, then press CD ►|| → CD ■ → CD ►|| → CD ■.

Display Test mode :

Press and hold the EDIT button and BASS/TREBLE button, then press BAND → LINE → BAND → LINE (FUNCTION is LINE).

Note 1 : Each test mode can be entered regardless of whether the power is on or off. However, it is not possible to enter the test mode of the particular function being operated. For example, it is not possible to enter the CD Test mode when the CD is in function.

4-3. RELEASING THE TEST MODE

Press the RESET button located on the bottom.

4-4. BASIC OPERATIONS OF THE TEST MODE

All operations are made using the AMS dial, YES/ENTER button and NO/CANCEL button.

The functions of each button are as follows:

Function Name	Functions
AMS dial	Used to change parameters and modes
YES/ENTER button	Used to advance and confirm
NO/CANCEL button	Used to return and cancel

4-5. SELECTING THE TEST MODE

There are 9 types of test modes (see table below). Turning the AMS dial clockwise switches modes shown in the table in the order from top to bottom. Turning the AMS dial counterclockwise switches modes shown in the table in the reverse order.

Display	Description
TEMP ADJUST	Temperature compensation offset adjustment
LDPWR ADJUST	Laser power adjustment
LDPWR CHECK	Laser power check
EF BAL ADJUST	Traverse adjustment
FBIAS ADJUST	Focus bias adjustment
FBIAS CHECK	Focus bias check
CPLAY MODE	Continuous playback mode
CREC MODE	Continuous recording mode
EEP MODE	Non-volatile storage memory control

- For details on each adjustment mode, see respective items of SECTION 5. ADJUSTMENT
- If you have accidentally entered another mode, press the NO/CANCEL button to exit.
- The EEP MODE is not used during servicing. Thus, details on this mode are not given. If this mode is accidentally entered, exit immediately by pressing the NO/CANCEL button as the unit may not operate correctly if the non-volatile storage memory being overwritten.

4-5-1. Operating in the Continuous Playback mode

1. Entering the Continuous Playback mode

- ① Insert a disk into the unit (either recordable or playback disk)
- ② Turn the AMS dial until "CPLAY MODE" is displayed.
- ③ Press the YES/ENTER button. The display will change to "CPLAY IN".
- ④ When accessing is completed, the display will change to "C1= 0000 AD = 00".

Note : The numbers of "00" displayed indicate the error rate and "ADER".

2. Changing the playback location

- ① Pressing the YES/ENTER button during continuous playback will change the display in the following manner, enabling change in the playback location.

"CPLAY MID" → "CPLAY OUT" → "CPLAY IN" ————
↑

- ② When accessing is completed, the display will change to "C1= 0000 AD = 00".

Note : The numbers of "00" displayed indicate the error rate and "ADER".

3. Exiting the Continuous Playback mode

- ① Press the NO/CANCEL button. The display will change to "CPLAY MODE".
- ② To remove the disk, press the MD EJECT button.

Note : The playback initiate addresses of IN, MID and OUT are indicated below. To display the playback position, press the DISPLAY button and "CPLAY(0000)".

IN 40h cluster
MID 300h cluster
OUT 700h cluster

4-5-2. Operating in the Continuous Recording mode

1. Entering the Continuous Recording mode

- ① Insert a disk that may be recorded into the unit (see Note 3)
- ② Turn the AMS dial until "CREC MODE" is displayed.
- ③ Press the YES/ENTER button. The display will change to "CREC MID".
- ④ When accessing is completed, the display will change to "CREC ()".

Note : The numbers of " " displayed indicate the record position address.

2. Changing the recording location

- ① Pressing the YES button during continuous recording will change the display in the following manner, enabling change in the recording location. During location change, the REC indicator will be off.

"CPLAY MID" → "CPLAY OUT" → "CPLAY IN" →

- ② When accessing is completed, the display will change to "CREC ()" and the REC indicator will light.

Note : The numbers of " " displayed indicate the record position address.

3. Exiting the Continuous Recording mode

- ① Press the NO/CANCEL button. The display will change to "CREC MODE" and the REC indicator will turn off.
- ② To remove the disk, press the MD EJECT button.

Note 1 : The record initiate addresses of IN, MID and OUT are indicated below. To display the record position, press the DISPLAY button and "CREC ()".

IN 40h cluster
MID 300h cluster
OUT 700h cluster

Note 2 : The NO/CANCEL button can be used at anytime to stop recording.

Note 3 : Detection for the write-protect tab is not executed when in the test mode. Do not enter the Continuous Recording mode with a disk you do not wish to have deleted.

Note 4 : Do not continuously record for more than 5 minutes.

Note 5 : Make sure no vibration is applied to the unit during continuous recording.

4-5-3. Non-volatile storage memory mode (EEP mode)

This is the mode to read and write the contents of the non-volatile storage memory.

This mode is not used for servicing.

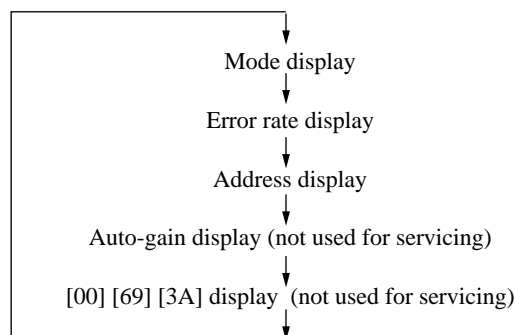
If you accidentally enter this mode, exit immediately by pressing the NO/CANCEL button.

4-6. FUNCTIONS OF OTHER BUTTONS

Function Name	Main Description
EDIT + ►	Continuous playback when pressed during disk is stopped. Tracking servo ON/OFF when pressed during continuous playback
EDIT + ■	Stopping of continuous recording/playback
►►	The thread moves outward while the button is pressed
◄◄	The thread moves inward while the button is pressed
EDIT + REC	Record ON/OFF during continuous playback
EDIT + SYNCHRO REC	Switched between pit and groove every time the button is pressed
EDIT + SHUF/PGM	Spindle servo mode switch (CLV S ← → CLV A)
DISPLAY	Display contents are switched every time the button is pressed
MD EJECT	Eject disk
RESET	Exit the test mode

4-7. TEST MODE DISPLAY

The display will switch in the following sequence every time the DISPLAY button is pressed.



1. Mode display

Displays such information as "TEMP ADJUST" and "CPLAY MODE".

2. Error rate display

The error rate is displayed using the following format.

C1=C1ER AD=ADER

3. Address display

The address is displayed using the following format (MO : recordable disk, CD : playback disk)

Switched between pit and groove every time the EDIT and SYNCHRO REC button is pressed

h = □□□□S = □□□□(MO pit and CD)

h = □□□□a = □□□□(MO groove)

h = : header address

S = : SUBQ address

a = : ATIP address

Note : "—" is displayed when servo is off.

4. Auto-gain display (not used for servicing)

The auto-gain is displayed using the following format.

AGF = @@ T = ## [&&]

@@ : focus servo gain coefficient

: tracking servo gain coefficient

&& : displays [OK], [NG] or [—].

[—] indicates that convergence is incomplete

Definitions of other displays

Display	Description	
	Indicator ON	Indicator OFF
SHUF	Continuous playback in operation (CLV : ON)	Disk stopped (CLV : OFF)
	Tracking servo OFF	Tracking servo ON
REC, SHUF	Recording mode ON	Recording mode OFF
TOC EDIT	ABCD adjustment completed	
DIGITAL	Focus auto-gain OK	(Flashing) Focus OK Tracking auto-gain NG
TRACK	Pit	Groove
DISC mark	High reflection	Low reflection
DATE	CLV-S	CLV-A

SECTION 5 ADJUSTMENTS

MD SECTION

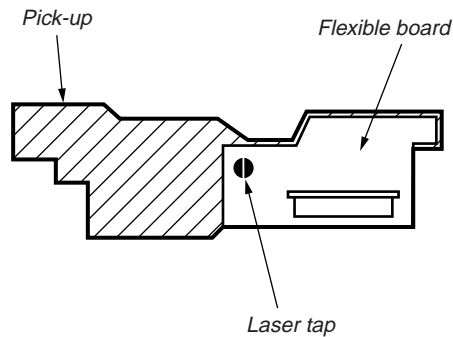
5-1. CAUTION WHEN CHECKING LASER DIODE EMISSION

Never look from directly above when checking the laser diode emission during adjustment as failure to do so may result in loss of eyesight.

5-2. CAUTIONS WHEN HANDLING THE OPTICAL PICK-UP (KMS-260A)

The laser diode within the optical pick-up is extremely vulnerable to static electricity. When handling, bridge the laser tap of the flexible board on the optical pick-up with solder.

When removing the connector, first bridge the laser tap with solder. Furthermore, do not remove the soldered bridge before reconnecting. In addition, take sufficient measures when working to prevent electrostatic damage. Take caution when handling the flexible board since it is easily torn.



5-3. CAUTIONS DURING ADJUSTMENT

- After replacing the following parts, make adjustments and checks for the table items where indicated with a O in the order given.

	Optical pickup	BD board		
		IC171	D101	IC101,IC121,IC192
1. Temperature compensation offset adjustment	X	O	O	O
2. Laser power adjustment	O	O	X	O
3. Traverse adjustment	O	O	X	O
4. Focus bias adjustment	O	O	X	O
5. Error rate check	O	O	X	O

- Perform adjustments in the test mode.
Exit the test mode when completed with adjustment.
- Perform adjustments in the order given.
- Use the following jig and measuring equipment:
 - Check disk (MD) TDYS-I (Part no : 4-963-646-01)
 - Laser power meter LPM-8001 (Part no : J-2501-046-A)
 - Oscilloscope (perform measurement after calibrating the probe)
 - Digital voltmeter
 - Thermometer
 - BD board waveform checking jig (part no : J-2501-124-A)
- When looking at multiple signals using oscilloscope, etc., make sure VC and GND are not connected within the oscilloscope. Failure to do so will short circuit VC and GND.
- Using the special jig enables checking of the waveform without soldering (see page 4 of Service Notes).

5-4. CREATING A CONTINUOUS RECORDING DISK

- This disk is used during focus bias adjustment and error rate check. The procedure for creating a continuous recording disk is as follows.

- Insert a disk (any commercially available blank disk).
- Turn the AMS dial until "CREC MODE" is displayed.
- Press the YES/ENTER button to display "CREC MID".
"CREC(0300)" will be displayed for an instant and recording will begin.
- Complete recording within 5 minutes.
- Press the NO/CANCEL button to stop recording.
- Press the MD EJECT button to remove the disk.

A continuously recorded disk can be created by following the procedure above for focus bias adjustment and error rate check.

Note: Take caution as to not apply vibration to the unit during continuous recording.

5-5. TEMPERATURE COMPENSATION OFFSET ADJUSTMENT

The temperature data at the time is saved in the non-volatile storage memory as the standard data of 25°C.

Notes:

- Do not make this adjustment under normal conditions.
- Perform this adjustment in an environment with ambient temperature between 22 to 28°C. Furthermore, make the adjustment immediately after turning on the power when the internal temperature and ambient temperature are between 22 to 28°C.
- After D101 replacement, perform the adjustment after the part has ample time to adjust to the ambient temperature.

Procedure:

- Turn the AMS dial until "TEMP ADJUST" is displayed.
- Press the YES/ENTER button and select the TEMP ADJUST mode.
- "TEMP= []" and the current temperature data will be displayed.
- To save the data: press the YES/ENTER button
To not save the data: press the NO/CANCEL button
- After pressing the YES/ENTER button, "TEMP= []SAVE" will be displayed momentarily and the display will then return to "TEMP ADJUST".
The display will immediately return to "TEMPADJUST" when pressing the NO/CANCEL button.

Specified values:

The value of TEMP= [] must be within the range of E0-EF, F0-FF, 00-0F, 10-1F or 20-2F.

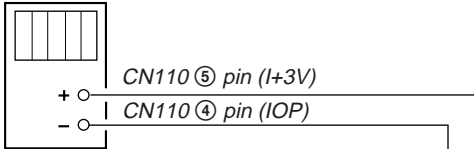
5-6. LASER POWER ADJUSTMENT

Connections:

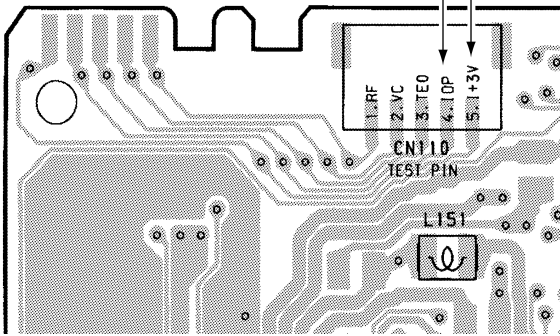
Laser power meter



Digital voltmeter



[BD BOARD] (SIDE A)



Procedure:

1. Insert the laser power meter into the disk loading port and set atop the objective lens of the optical pickup (if this cannot be done successfully, shift the optical pickup using the ◀ and ▶ buttons).
Connect the digital voltmeter to the CN110 ⑤ pin (I+3V) and CN110 ④ pin (IOP).
2. Turn the AMS dial until "LDPWR ADJUST" is displayed. (Laser power: adjustment purposes)
3. Press the YES/ENTER button once to display "LD 0.9mW \$ [] []".
4. Turn the AMS dial so that the laser power meter reading is between 0.86 – 0.92mW. After setting the range dial of the laser power meter to 10mW, press the YES/ENTER button to save the adjustment result to the non-volatile storage memory (at this time, "LD SAVE \$ [] []" will be displayed for an instant).
5. Next, "LD 7.0mW \$ [] []" will be displayed.
6. Turn the AMS dial so that the laser power meter reading is between 6.9 – 7.1mW, then press the YES/ENTER button to save the adjustment result (at this time, "LD SAVE \$ [] []" will be displayed for an instant).

Note: Do not emit the 7.0mW emission more than 15 seconds continuously.

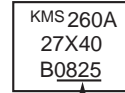
7. Next, turn the AMS dial until "LDPWR CHECK" is displayed.
8. Press the YES/ENTER button once to display "LD 0.9mW \$ [] []".
At this time, check to see that the laser power meter reading is between 0.85 – 0.91mW.
9. Next, press the YES/ENTER button once more to display "LD 7.0mW \$ [] []".
At this time check to see that the laser power meter and digital voltmeter reading comply with the specified values.

Specified values:

Laser power meter reading : 6.9–7.1mW

Digital voltmeter reading : ±10% the value on the label of the optical pickup.

(Optical pick-up label)



In this case, $I_{op} = 82.5\text{mA}$

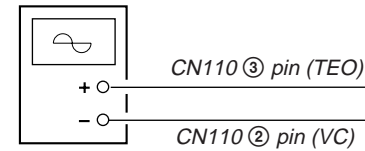
$I_{op}(\text{mA}) = \text{digital voltmeter reading (mV)} / 1(\Omega)$

10. Press the NO/CANCEL button to display "LDPWR CHECK" and stop laser emission. (The NO/CANCEL button can be used at anytime to stop laser emission)

5-7. TRAVERSE ADJUSTMENT

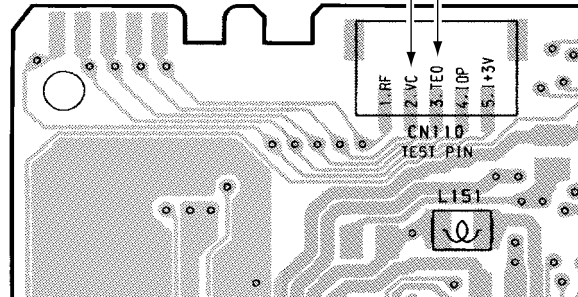
Connection:

Oscilloscope



VOLT/DIV : 0.5V
 TIME/DIV : 10msec
 Input: DC mode

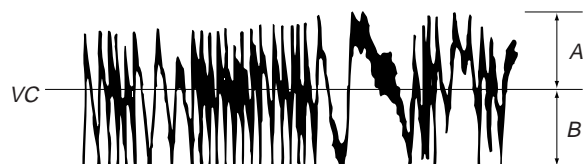
[BD BOARD] (SIDE A)



Procedure:

1. Connect the oscilloscope to the CN110 ③ pin (TEO) and CN110 ② pin (VC) of the BD board.
2. Insert a disk (any commercially available disk) that may be recorded on (see Note 1).
3. Press the ◀ or ▶ button to shift the optical pick-up to the outer edge of the pit.
4. Turn the AMS dial until "EFBAL ADJUST" is displayed.
5. Press the YES/ENTER button to display "EFB= [] [] MO-R". (The unit will be in the condition of: laser power READ power, focus servo ON, tracking servo OFF and spindle (S) servo ON.)
6. Turn the AMS dial so that the waveform on the oscilloscope is that of the specified value (turning the AMS dial will change the numbers of "EFB= [] []" as well as the waveform). During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value. (read power traverse adjustment)

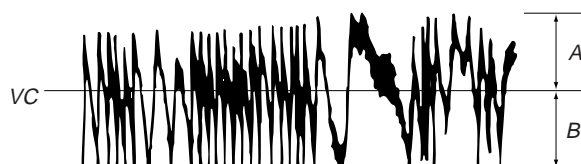
(Traverse waveform)



Specification: $A=B$

7. Press the YES/ENTER button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant, then "EFB= [] MO-W" will be displayed).
8. Turn the AMS dial so that the waveform on the oscilloscope is that of the specified value (turning the AMS dial will change the numbers of "EFB= []" as well as the waveform). During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value. (write power traverse adjustment)

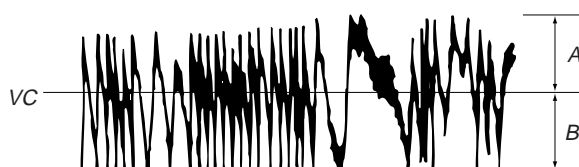
(Traverse waveform)



Specification: A=B

9. Press the YES/ENTER button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant).
10. "EFB= [] MO-P" will then be displayed and the servo will be activated after the optical pickup is automatically shifted to the inner edge of the pit.
11. At this time, turn the AMS dial so that the waveform on the oscilloscope is that of the specified value. During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value.

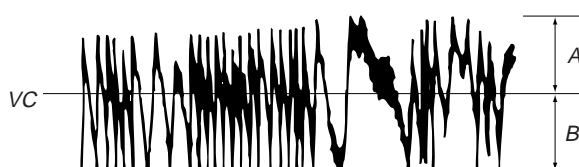
(Traverse waveform)



Specification: A=B

12. Press the YES/ENTER button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant). "EFBAL CD" will then be displayed and the rotation of the disk will automatically stop.
13. Press the MD EJECT button to remove the disk.
14. Insert the check disk (MD) TDYS-1.
15. Press the YES/ENTER button to display "EFB= [] CD". The servo will automatically be activated.
16. Turn the AMS dial so that the waveform on the oscilloscope is that of the specified value. During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value.

(Traverse waveform)



Specification: A=B

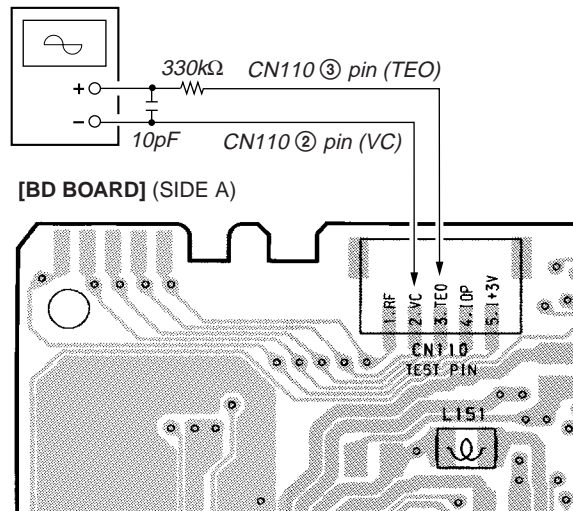
17. Press the YES/ENTER button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant). "EFBAL ADJUST" will then be displayed.

18. Press the MD EJECT button to remove the check disk (MD) TDYS-1.

Note 1: When using a pre-recorded disk for adjustment, data will be deleted during MO write.

Note 2: If the traverse waveform is hard to see, reconnect the oscilloscope as shown below for easier view.

Oscilloscope



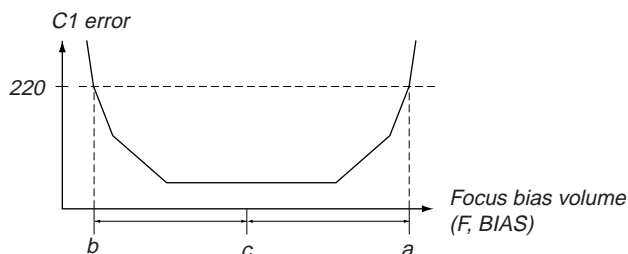
5-8. FOCUS BIAS ADJUSTMENT

Procedure:

1. Insert a continuously recorded disk (see 5-4. Creating a continuous recording disk).
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the YES/ENTER button to display "CPLAY MID".
4. When "C1= [] AD= []" is displayed, press the NO/CANCEL button.
5. Turn the AMS dial until "FBIAJ ADJUST" is displayed.
6. Press the YES/ENTER button to display "[]/[] a= []". The first 4 digits indicate the C1 error rate, the 2 digits following "/" indicate ADER and the 2 digits following "a=" indicate the focus bias volume.
7. Turn the AMS dial clockwise and search the focus bias volume closest to the C1 error rate of 220 (see Note 2).
8. Press the YES/ENTER button to display "[]/[] b= []".
9. Turn the AMS dial counterclockwise and search the focus bias volume which is the C1 error rate of 220.
10. Press the YES/ENTER button to display "[]/[] c= []".
11. Press the YES/ENTER button after making sure that the C1 error rate is below 50 and ADER is 00.
12. Press the YES/ENTER button if the value indicated in the "[]-[]-[] ([])" display is more than 20. Otherwise, press the NO/CANCEL button and repeat procedure from step 2.
13. Press the MD EJECT button to remove the continuously recorded disk.

Note 1: The relationship of the C1 error and focus bias volume is shown in the diagram below. Find points a and b shown in the diagram by following the procedure above. The met focal point C is found by automatic calculation.

Note 2: The C1 error rate fluctuates. Thus, make the adjustment using the average value.



5-9. ERROR RATE CHECK

5-9-1. Pit disk error rate check

Procedure:

1. Insert the check disk (MD) TDYS-1
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the YES/ENTER button to display "CPLAY MID".
4. The display will change to "C1= 0000 AD= 00".
5. Check to see that the C1 error rate is less than 20.
6. Press the NO/CANCEL button to stop playback, then press the MD EJECT button to remove the check disk (MD).

5-9-2. MO error rate check

Procedure:

1. Insert a continuously recorded disk (see 5-4. Creating a continuous recording disk).
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the YES/ENTER button to display "CPLAY MID".
4. The display will change to "C1= 0000 AD= 00".
5. Check to see that the C1 error rate is less than 50 and ADER is constantly not above 00.
6. Press the NO/CANCEL button to stop playback, then press the button to remove the continuously recorded disk.

5-10. FOCUS BIAS CHECK

The focus tolerance volume is checked by changing the focus bias volume.

Procedure:

1. Insert a continuously recorded disk (see 5-4. Creating a continuous recording disk).
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the YES/ENTER button to display "CPLAY MID".
4. When "C1= 0000 AD= 00" is displayed, press the NO/CANCEL button.
5. Turn the AMS dial until "FBIAS CHECK" is displayed.
6. Press the YES/ENTER button to display "0000/00 c= 00". The first 4 digits indicate the C1 error, the 2 digits following "/" indicate ADER and the 2 digits following "c=" indicate the focus bias volume.
At this time, check to see that the C1 error is less than 50 and ADER is 00.
7. Press the YES/ENTER button to change the display to "0000/00 b= 00".
At this time check to see that the C1 error is not less than 220 and ADER is constantly not above 00.
8. Press the YES/ENTER button to change the display to "0000/00 a= 00".
At this time check to see that the C1 error is not less than 220 and ADER is constantly not above 00.
9. Press the NO/CANCEL button, then press the MD EJECT button to remove the continuously recorded disk.

Note 1: If the C1 error or ADER is more than 00 for only one of points a (8. above) and b (7. above), there is the possibility of a gap in the focus bias adjustment. In such case, repeat adjustment.

CD SECTION

1. Enter the CD Test mode
(see page 19)

88 07 00 3A0

The above is the default display.

Pressing the ►|| button will rotate the CD and pressing the YES/ENTER button once more will output sounds.

Pressing the YES/ENTER button will execute automatic adjustment and values will change; however, this value is quite normal.

2. RF LEVEL and jitter check

Test mode PLAY status ("21" and "ALL" display ON)

21 07 00 3A0
ALL

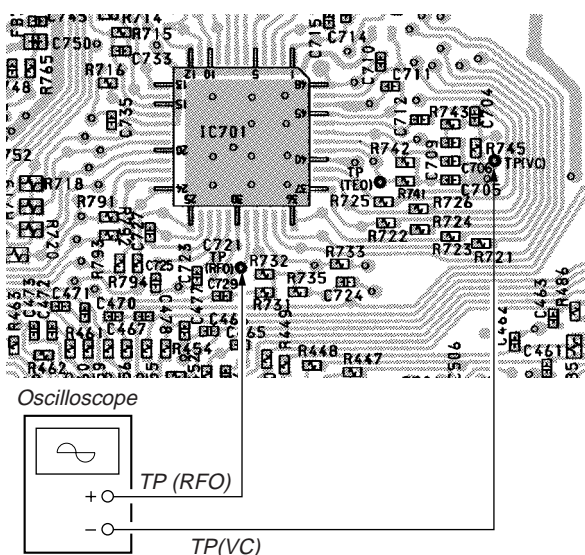
ALL display ON : LPC (laser power control ON)

ALL display OFF : LPC (laser power control OFF)

(►|| button : ALL display ON/OFF)

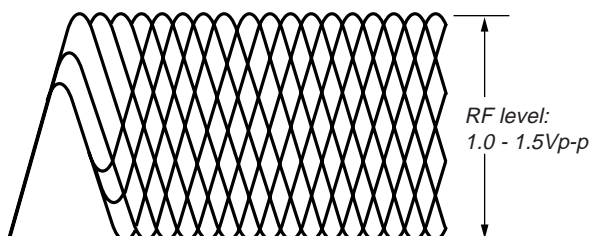
Connection Point:

[MAIN BOARD] (SIDE A)



Check to see that the jitter is less than 9.0 nsec.
and RF level is between 1.0 – 1.5Vp-p.

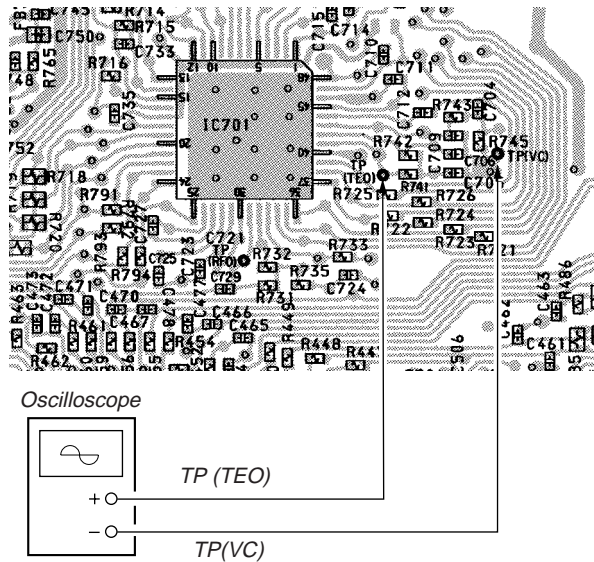
VOLT/DIV : 200mV (using 10:1 probe)
TIME/DIV : 500ns



3. Traverse signal check

Connection Point:

[MAIN BOARD] (SIDE A)

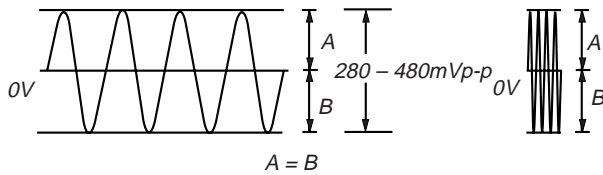


Press the FF or FR from step2.

Check to see that the traverse signal level is between 280 - 480mVp-p.

Note:

Extend the sweep time for easier view.



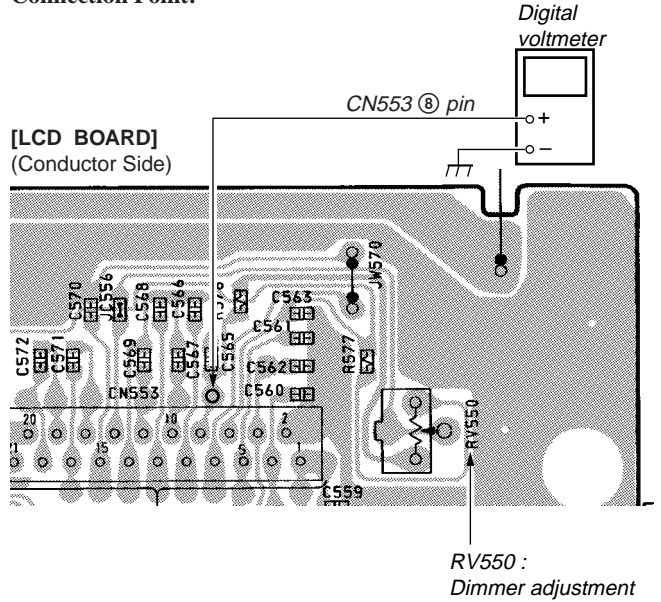
- After completed with adjustment, press the RESET button to release the test mode.

DISPLAY SECTION

DIMMER ADJUSTMENT

- Connect the LCD1 to the CN533 of the LCD board.
- Connect the digital voltmeter to the CN533 ⑧ pin of the LCD board.
- Adjust the RV550 of the LCD board for 2.83V reading on digital voltmeter.
Standard value : 2.83 – 2.93V

Connection Point:



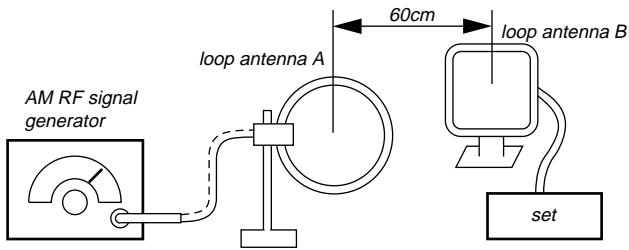
TUNER SECTION

0dB=1 μ V

AM Section

Function switch : MW or LW

Volume : MIN



30% amplitude modulation by 400Hz signal

Output level : as low as possible

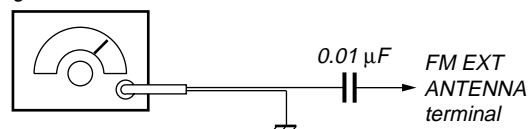
FM Section

Function switch : FM

Volume : MIN

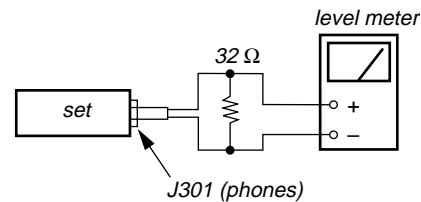
FM ANTENNA SELECTOR switch : EXT

FM RF signal generator



22.5kHz frequency deviation by 400Hz signal.

Output level : as low as possible



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

MW/LW IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
CFT1	450kHz

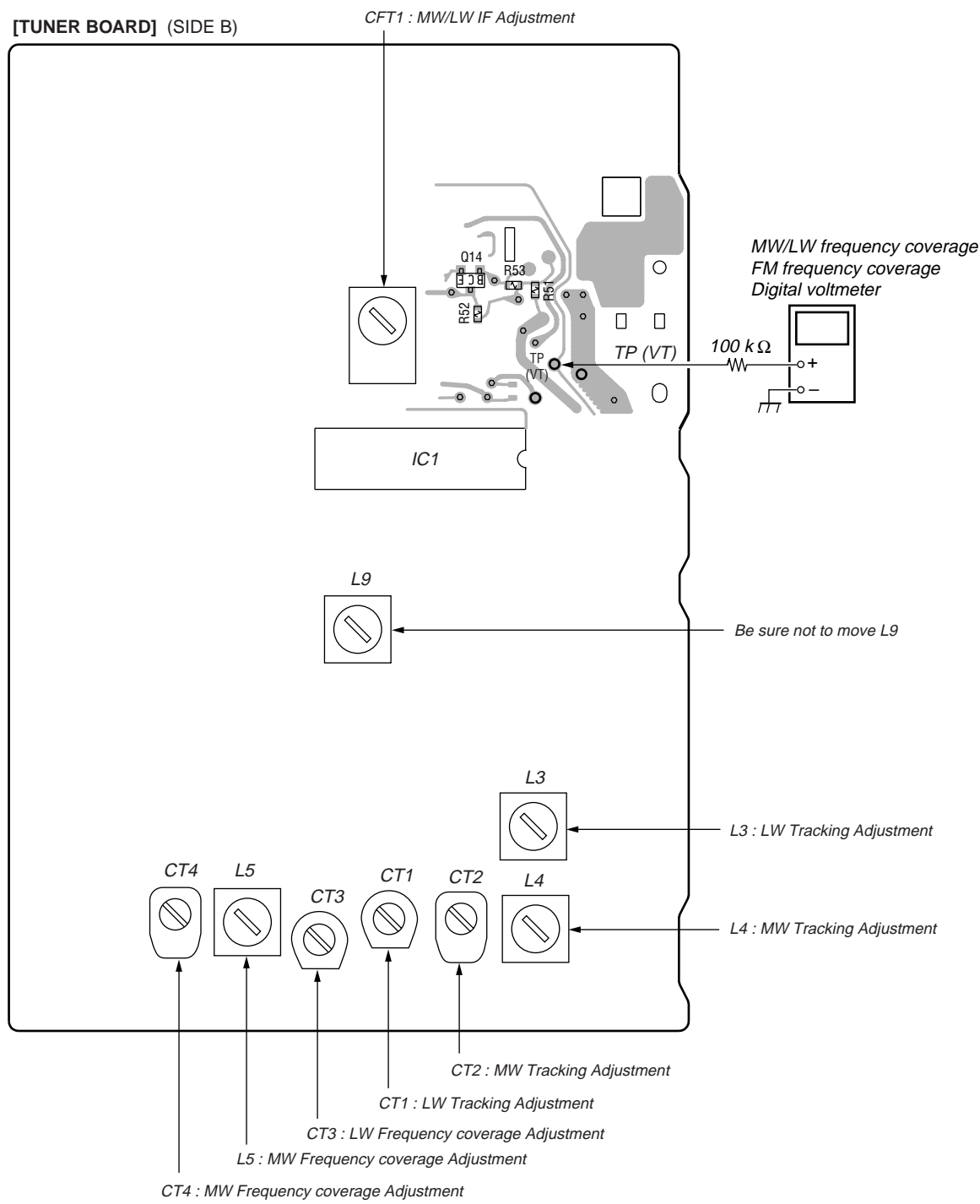
MW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter.
L5	531kHz	Adjustment value :1.0V Standard value : 0.8 – 1.2V
CT4	1,611kHz	Adjustment value :5.4V Standard value : 5.0 – 5.8V

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L4	621kHz
CT2	1,404kHz

LW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter
Confirmation	153kHz	Standard value : 0.5 – 0.9V
CT3	297kHz	Adjustment value :5.5V Standard value : 5.1 – 5.9V

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3	162kHz
CT1	261kHz

Connect and Adjustment Location :



SECTION 6 DIAGRAMS

6-1. EXPLANATION OF IC TERMINALS

BD BOARD IC101 MD SECTION RF AMPLIFIER (CXA2523R)

Pin No.	Pin name	I/O	Description
1	I	I	Input of RF signal I converted from I to V
2	J	I	Input of RF signal J converted from I to V.
3	VC	O	Midpoint voltage (+1.5V) generation output.
4 - 9	A-F	I	Signal inputs from optical pickup detector.
10	PD	I	Light volume monitor input.
11	APC	O	Laser APC output.
12	APCREF	I	Reference voltage input for laser power setting.
13	GND	–	Ground.
14	TEMPI	I	Temperature sensor connection terminal.
15	TEMPR	O	Reference voltage output for temperature sensor.
16	SWDT	I	Serial data input from CXD2652AR.
17	SCLK	I	Serial clock input from CXD2652AR.
18	XLAT	I	Latch signal input from CXD2652AR. “L”: Latch
19	XSTBY	I	Standby signal input. “L”: Standby
20	FOCNT	I	Center frequency control voltage input of internal circuits BFF22, BPF3T and EQ from CXD2652AR.
21	VREF	O	Reference voltage output (not used).
22	EQADJ	I/O	Pin for center frequency setting of internal circuit EQ.
23	3TADJ	I/O	Pin for center frequency setting of internal circuit BPF3T.
24	VCC	–	Power supply (+3V).
25	WBLADJ	I/O	Pin for center frequency setting of internal circuit BPF22.
26	TE	O	Tracking error signal output to CXD2652AR.
27	CSLED	–	External condenser connector pin for thread error signal LPF.
28	SE	O	Thread error signal output to CXD2652AR.
29	ADFM	O	ADIP FM signal output.
30	ADIN	I	ADIP signal comparator input ADFM connection by coupling with AC.
31	ADAGC	–	External condenser connector pin for AGC of ADIP.
32	ADFG	O	ADIP duplex signal output to CXD2652AR.
33	AUX	O	I3 signal/temperature signal output (switched by serial command) to CXD2652AR.
34	FE	O	Focus error signal output to CXD2652AR.
35	ABCD	O	Light volume signal output to CXD2652AR.
36	BOTM	O	RF/ABCD bottom hold signal output to CXD2652AR.
37	PEAK	O	RF/ABCD peak hold signal output to CXD2652AR.
38	RF	O	RF equalizer output to CXD2652AR.
39	RFAGC	–	RF AGC circuit external condenser connector pin.
40	AGCI	I	Input RF amplifier output is input to RF AGC circuit by coupling with AC.
41	COMPO	O	User comparator output (not used).
42	COMPP	I	User comparator input (Fixed at “L”).
43	ADDC	I/O	Low-pass cutoff external capacitor terminal of ADIP amplifier.
44	OPO	O	User op amplifier output (not used).
45	OPN	I	User op amplifier inverted input (Fixed at “L”).
46	RFO	O	RF amplifier output.
47	MORFI	I	Group RF signal input by coupling with AC.
48	MORFO	O	Group RF signal output.

APC : Auto Power Control

AGC : Auto Gain Control

MAIN BOARD (2/2) IC405 SYSTEM CONTROL (CXP740096-026Q)

Pin No.	Pin name	I/O	Description
1	MD	O	MD function output.
2	RADIO/LINE	O	Radio/LINE function output.
3	ACCHK	I	AC power supply detection input. L : Supplied H : Not supplied
4	NC	–	Not used (OPEN).
5	NC	–	Not used (OPEN).
6	NC	–	Not used (OPEN).
7	RDS - DATA	I	RDS serial data input.
8	NC	–	Not used (OPEN).
9	RDS - CLK	I	RDS serial clock input.
10	CD - TURN	I	CD ON/OFF detection input.
11	NC	–	Not used (OPEN).
12	CD - OPEN	O	CD tray control output. H : OPEN
13	CD - CLOSE	O	CD tray control output. H : CLOSE
14	NC	–	Not used (OPEN).
15	NC	–	Not used (OPEN).
16	NC	–	Not used (OPEN).
17	MD - H	O	D/A converter down signal output (MD play).
18	REC - H	O	D/A converter down signal output (MD recording).
19	MD - RST	O	Reset signal output for MD system control.
20	MD - SCTS	O	UART send request output to MD.
21	MD - SRTS	I	UART send request input from MD.
22	MD - PDOWN	O	Notification of power cutoff to MD.
23	D/LCON	O	Back light ON/OFF control output.
24	LCD - RST	O	Reset signal output to LCD.
25	LCD - CE	O	Chip enable output to LCD.
26	LCD - A0	O	Address output to LCD.
27	LED - MD	O	MD LED drive output.
28	LED - RADIO	O	BAND LED drive output.
29	LED - CD	O	CD LED drive output.
30	NC	–	Not used (OPEN).
31	RADIO POWER	O	Radio power supply ON/OFF control output.
32	CD POWER	O	CD power supply ON/OFF control output.
33	NC	–	Not used (OPEN).
34	NC	–	Not used (OPEN).
35	NC	–	Not used (OPEN).
36	NC	–	Not used (OPEN).
37	NC	–	Not used (OPEN).
38	NC	–	Not used (OPEN).
39	TU - SFT	O	System clock shift output.
40	RST	I	System reset terminal.
41	VSS	–	Ground.
42	XTAL	I	System clock (8MHz) oscillation input.
43	EXTAL	O	System clock (8MHz) oscillation output.
44	SELECT - GND	O	Destination select terminal.
45	HP - SW	I	Headphone detection input.
46	LCD - DATA	O	Serial data output to LCD.
47	LCD - CLK	O	Serial clock output to LCD.
48	CD - DOOR	I	CD tray Open/Close detection input.
49	JOG - A	I	Jog dial rotation detection input (A).
50	JOG - B	I	Jog dial rotation detection input (B).

Pin No.	Pin name	I/O	Description
51	SELECT	I	Destination select detection input.
52	AVSS	–	A/D converter ground terminal.
53	AVREF	–	A/D converter reference voltage input.
54	AVDD	–	A/D converter power supply terminal.
55	LED - PRESET/AMS	O	AMS/PRESET LED drive output.
56	LED - SELECT	O	SELECT LED drive output.
57	LINE	O	Function LINE output.
58	LINE - LEVEL	O	LINE level control signal output.
59	KEY4	I	Key input (4).
60	KEY3	I	Key input (3).
61	KEY2	I	Key input (2).
62	KEY1	I	Key input (1).
63	TU - MUTE	O	Radio mute drive signal output.
64	TU - COUNT	I	Radio PLL data input.
65	TU - CLK	O	Radio PLL clock output.
66	TU - DATA	O	Radio PLL data output.
67	TU - CE	O	Radio PLL chip enable output.
68	NC	–	Not used (OPEN).
69	MD - SRXD	I	Communicate with MD and UART receive input.
70	MD - STXD	O	Communicate with MD and UART send output.
71	NC	–	Not used (OPEN).
72	NC	–	Not used (OPEN).
73	CD - XRST	O	CD system reset signal output.
74	CD - CLK	O	CD serial clock output.
75	CD - XLAT	O	CD system lack output.
76	CD - DATA	O	CD serial data output.
77	CD - SENSE1	I	CD SENSE 1 input.
78	CD - SCOR	I	CD SCOR input.
79	CD - SQSO	I	CD SUB Q data input.
80	CD - SHORT	I	CD POWER circuit short detection input.
81	CD - SQCK	O	CD SUB Q clock output.
82	CD - MUTE	O	CD system mute output.
83	CD - FOK	I	CD FOK input.
84	CD - SENSE2	I	CD SENSE 2 input.
85	RMC	I	Remote control signal input.
86	TEX	I	Real clock oscillation input (32.768kHz).
87	TX	O	Real clock oscillation output (32.768kHz).
88	VSS	–	Ground.
89	VDD	–	Power supply terminal.
90	NC	–	Not used (OPEN).
91	NC	–	Not used (OPEN).
92	NC	–	Not used (OPEN).
93	SPEED - L	O	Open/Close motor drive output.
94	AU - DATA	O	AUDIO data output.
95	AU - CLK	O	AUDIO clock output.
96	B/L - CONT	O	Back light ON/OFF control output.
97	PA - STANDBY	O	Power amplifier ON/Standby control output.
98	AMUTE	O	Audio mute signal output.
99	CD	O	CD function output.
100	P - CON	O	POWER ON/OFF control.

• **BD BOARD IC121 digital signal processor, digital servo signal processor, EFM/ACIRC encoder/decoder, shock-proof memory controller, ATRAC encoder/decoder, 2Mbit DRAM (CXD2652AR)**

Pin No.	Pin name	I/O	Description
1	MNT0(FOK)	O	FOK signal output to system control. H is outputted when in focus.
2	MNT1(SHCK)	O	Track-jump detection signal output to system control.
3	MNT2(XBUSY)	O	Monitor 2 output to system control.
4	MNT3(SLOC)	O	Monitor 3 output to system control.
5	SWDT	I	Write-data signal input from system control.
6	SCLK	I(S)	Serial clock signal input from system control.
7	XLAT	I(S)	Serial latch signal input from system control.
8	SRDT	O(3)	Read-data signal output to system control .
9	SENS	O(3)	Internal status (SENSE) output to system control.
10	XRST	I(S)	Reset signal input from system control. “L”: Reset
11	SQSY	O	Subcode Q-SYNC (SCOR) output to system control. Majority of those which output “L” every 13.3 seconds output “H”.
12	DQSY	O	Subcode of digital-in U-bit CD format to system control. Majority of those which outputs “L” every 13.3 seconds during output of Q-SYNG (SCOR) outputs “H”.
13	RECP	I	Laser power switch input from system control “H”: Record, “L”: Playback.
14	XINT	O	Interrupt status output to system control.
15	TX	I	Record data output authorization input from system control.
16	OSCI	I	System clock input (512Fs = 22.5792MHz).
17	OSCO	O	System clock output (512FS = 22.5792MHz).
18	XTSL	I	Pin for system clock frequency setting . “L”: 45.1584MHz “H”: 22.5792MHz (Fixed at “H”).
19	TEST G	–	Test terminal.
20	DVSS	–	Ground (digital system).
21	DIN	I	Digital audio input (for optical input).
22	DOUT	O	Digital audio output (for optical output).
23	ADDT	I	Data input from A/D converter.
24	DADT	O	Data output to D/A converter.
25	LRCK	O	LR clock output (44.1kHz) for A/D and D/A converters.
26	XBCK	O	Bit clock output (2.8224MHz) for A/D and D/A converters.
27	FS256	O	11.2896MHz clock output (unused).
28	DVDD	–	Power supply for digital (+3V).
29–32	A03–A00	O	DRAM address outputs.
33	A10	O	
34–38	A04–A08	O	
39	A11	O	
40	DVSS	–	Ground for digital.
41	XOE	O	DRAM output-enable output.
42	XCAS	O	DRAM CAS signal output.
43	A09	O	DRAM address output.
44	XRAS	O	DRAM RAS signal output.
45	XWE	O	DRAM write-enable signal output.
46	D1	I/O	DRAM data I/O.
47	D0	I/O	
48, 49	D2,D3	I/O	
50	MVCI	I(S)	Clock input from external VCO (Fixed at “L”).

* In the I/O column, I(S) is Schmitt input, I(A) is analog input, O(3) is state output and O(A) is analog output.

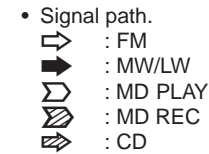
Pin No.	Pin name	I/O	Description
51	ASYO	O	Playback EFM duplex signal output.
52	ASYI	I(A)	Playback EFM comparator slice level input.
53	AVDD	–	Power supply for analog (+3V).
54	BIAS	I(A)	Playback EFM comparator bias current input.
55	RFI	I(A)	Playback EFM RF signal input.
56	AVSS	–	Ground for analog.
57	PDO	O(3)	Phase comparison output for clock playback analog PLL of playback EFM (not used).
58	PCO	O(3)	Phase comparison output for record/playback EFM system master PLL.
59	FILI	I(A)	Filter input for record/playback EFM system master PLL.
60	FILO	O(A)	Filter output for record/playback EFM system master PLL.
61	CLTV	I(A)	Internal VCO control voltage input for record/playback EFM system master PLL15.
62	PEAK	I(A)	Light volume signal peak hold input from CXA2523AR.
63	BOTM	I(A)	Light volume signal bottom hold input from CXA2523AR.
64	ABCD	I(A)	Light volume signal input from CXA2523AR.
65	FE	I(A)	Focus error signal input from CXA2523AR.
66	AUX1	I(A)	Auxiliary A/D input.
67	VC	I(A)	Midpoint voltage (+1.5V) input from CXA2523AR.
68	ADIO	O(A)	A/D converter input signal monitor output (not used).
69	AVDD	–	Power supply for analog (+3V).
70	ADRT	I(A)	A/D converter operating range upper limit voltage input (Fixed at “H”) .
71	ADRB	I(A)	A/D converter operating range lower limit voltage input (Fixed at “L”).
72	AVSS	–	Ground for analog.
73	SE	I(A)	Thread error signal input from CXA2523AR.
74	TE	I(A)	Tracking error signal input from CXA2523AR.
75	AUX2	I(A)	Auxiliary A/D input (Fixed at “L”).
76	DCHG	I(A)	Connected to +3V power supply.
77	APC	I(A)	Laser digital APC error signal input (Fixed at “L”).
78	ADFG	I(S)	ADIP duplex FM signal input (22.05±1kHz) from CXA2523AR.
79	F0CNT	O	Filter f0 control output from CXA2523AR.
80	XLRF	O	Control latch output from CXA2523AR.
81	CKRF	O	Control clock output from CXA2523AR.
82	DTRF	O	Control data output from CXA2523AR.
83	APCREF	O	Laser APC reference PWM output.
84	LDDR	O	Laser digital APC PWM output (not used).
85	TRDR	O	Tracking servo drive PWM output (-).
86	TFDR	O	Tracking servo drive PWM output (+).
87	DVDD	–	Power supply for digital (+3V).
88	FFDR	O	Focus servo drive PWM output (+).
89	FRDR	O	Focus servo drive PWM output (-).
90	FS4	O	176.4kHz clock signal output (X’tal) (not used).
91	SRDR	O	Thread servo drive PWM output (-).
92	SFDR	O	Thread servo drive PWM output (+).
93	SPRD	O	Spindle servo drive PWM output (-).
94	SPFD	O	Spindle servo drive PWM output (+).
95	FGIN	I(S)	Spindle CAV servo FG input.
96–98	TEST1–TEST3	I	Test input pins (Fixed at “L”).
99	DVSS	–	Ground for digital.
100	EFMO	O	EFM output during recording.

EFM : Eight to Fourteen Modulation
PLL : Phase Locked Loop
VCO : Voltage Controlled Oscillator

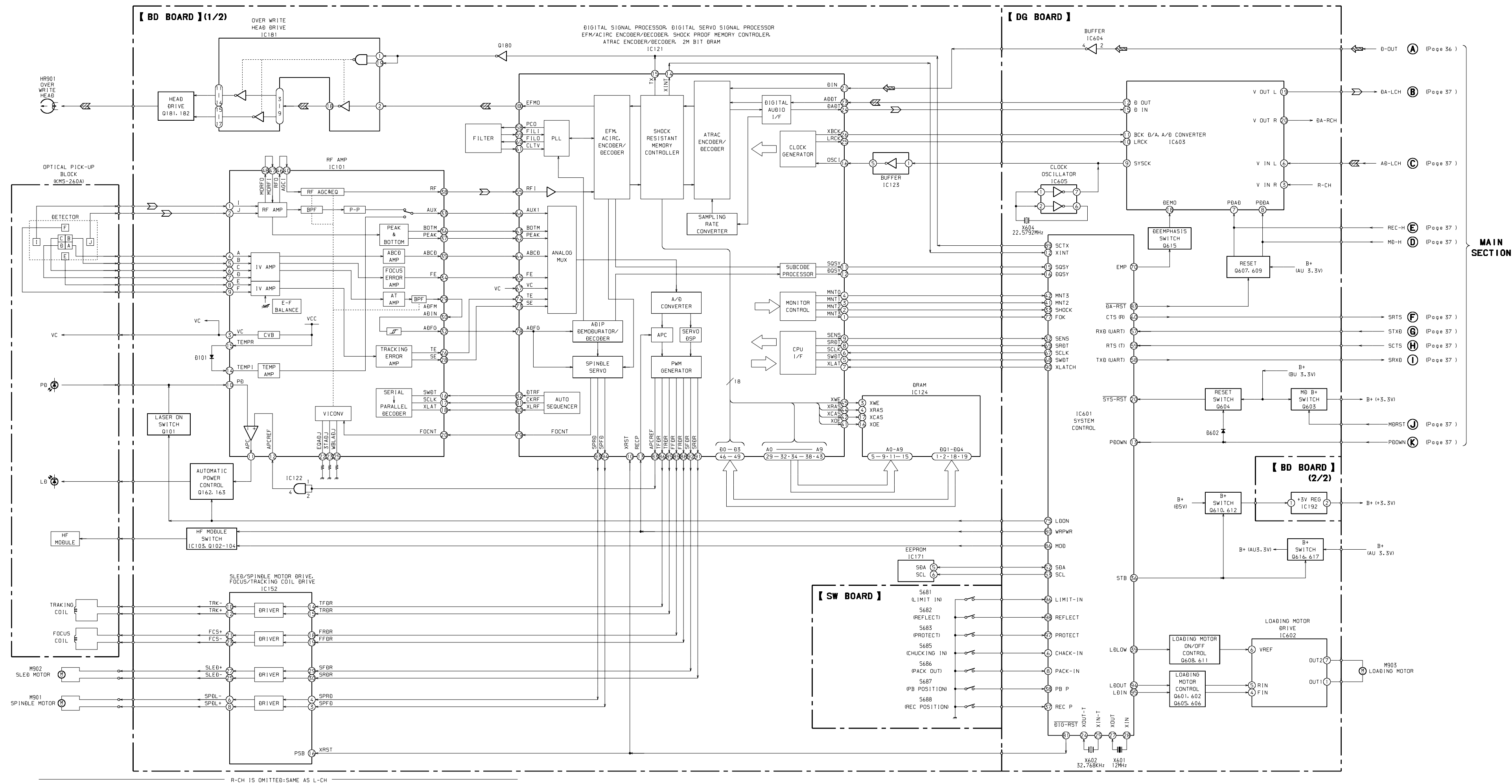
DG BOARD IC601 SYSYTEM CONTROL (RU8X12MF-0021)

Pin No.	Pin name	I/O	Description
1	DAOUT0	–	not used (OPEN).
2	DAOUOT1	–	not used (OPEN).
3	KEY0	–	Reserved (“H” level).
4	KEY1	–	Reserved (“H” level).
5	KEY2	–	Reserved (“H” level).
6	CHACK IN	I	Detection input from chucking-in switch (S685).
7	PACK IN	I	Detection input from back-in switch (not used).
8	PACK OUT	I	Detection input from back-out switch (S686).
9		–	not used (ground connection).
10		–	not used (ground connection).
11	AVSS	–	ground for analog.
12	X INT	I	Interrupt status input from digital signal processor IC (IC121).
13	PDOWN	I	Power cutoff signal input from master control IC (IC801).
14		–	Reserved (ground connection).
15	SQSY	I	Subcode Q-SYNC (SCOR) input from digital signal processor IC (IC121).
16	DQSY	I	Digital-in U-bit format subcode input from digital signal processor IC (IC121).
17		–	Reserved (ground connection).
18		–	Reserved (ground connection).
19		–	Reserved (ground connection).
20	<u>SYS-RST</u>	I	System reset input pin “L”: Reset.
21	TEST	I	Test mode pin “L”: Normal mode, “H”: Test mode.
22	+3.3V	–	Power supply terminal (VCC).
23	VBAT	I	Power supply pin for internal RTC and RAM.
24	XOUT-T	O	Sub-clock connector pin (32.768kHz).
25	XINT-T	I	Sub-clock connector pin (32.768kHz).
26	GND	–	Power supply terminal (ground).
27	XOUT	O	Main clock connector pin (12MHz).
28	XIN	I	Main clock connector pin (12MHz).
29	EXEM	I	Switch pin for External ROM mode and Internal ROM mode.
30	S1	–	not used (OPEN).
31		–	Reserved (ground connection).
32	SENS	I	Internal status (SENSE) input from digital signal processor IC (IC121).
33	SHOCK	I	Track-jump detection signal input from digital signal processor IC (IC121).
34		–	Reserved (ground connection).
35		–	Reserved (ground connection).
36	STB	O	Power ON/OFF control signal output.
37	REC P	I	Detection input from REC switch (S688).
38	PB P	I	Detection input from PB switch (S687).
39	LD LOW	O	Loading motor control signal output.
40	NC	–	not used (OPEN).
41	MNT2	I	Monitor 2 input from digital signal processor IC (IC121).
42	MNT3	I	Monitor 3 input from digital signal processor IC (IC121).
43	LEDO	–	not used (OPEN).
44		–	Reserved (ground connection).
45		–	Reserved (ground connection).
46	RST LOW	–	not used (OPEN).
47	GND	–	Power supply terminal (ground).
48	+3.3V	–	Power supply terminal (VCC).
49	SNG/CHG	–	Reserved (ground connection).
50	JOG1	–	Reserved (ground connection).

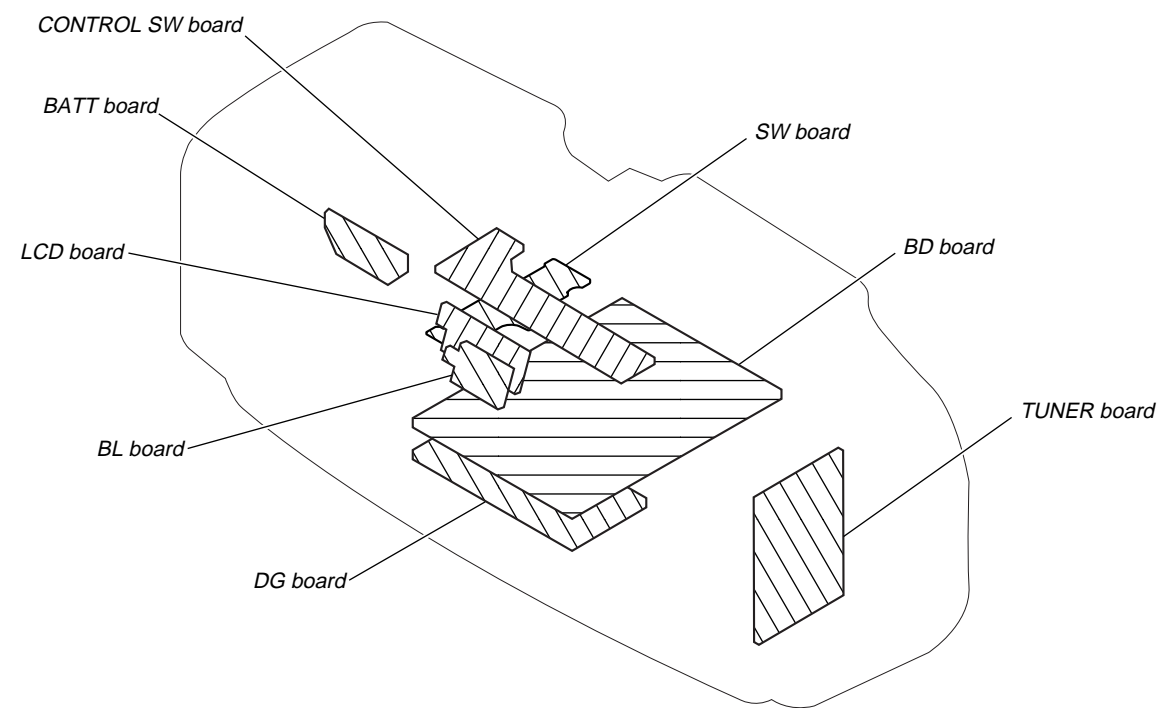
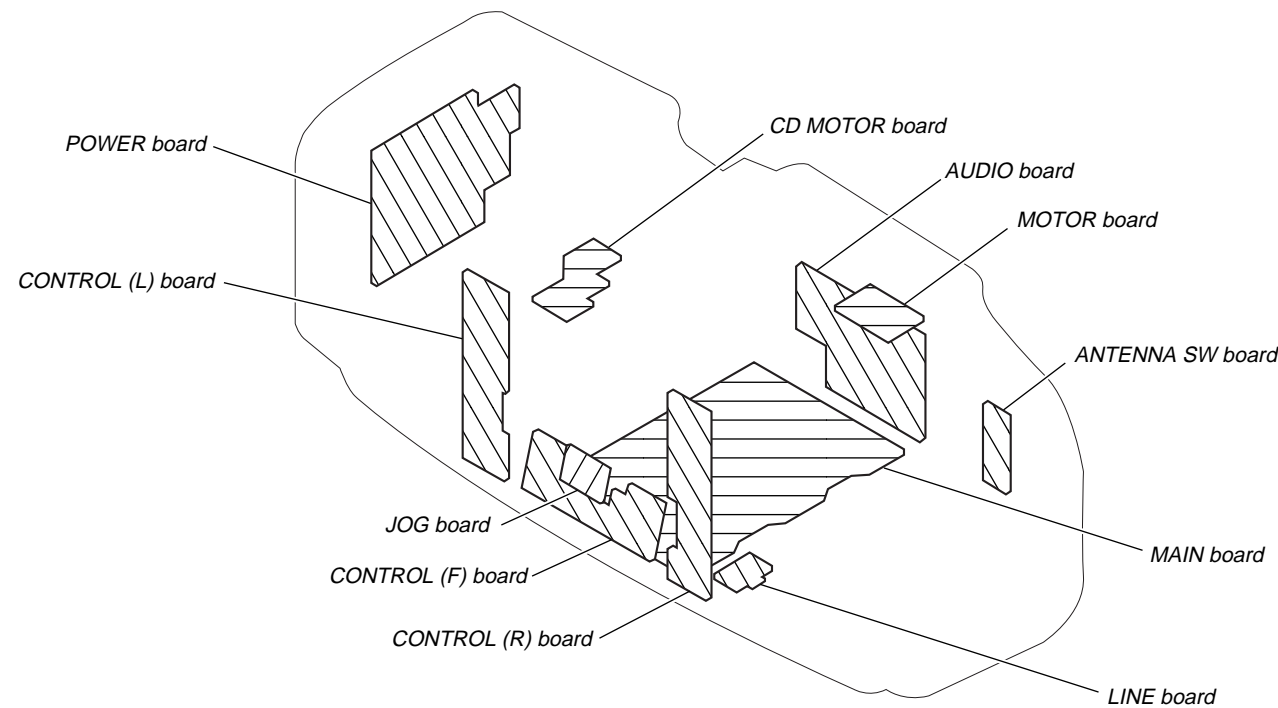
Pin No.	Pin name	I/O	Description
51	JOG0	–	Reserved (ground connection).
52	SDA	I/O	Serial data I/O with EEPROM (IC171).
53	SCL	O	Serial clock output to EEPROM (IC171).
54	2M/4M	–	Reserved (“H” level).
55		–	Reserved (ground connection).
56		–	Reserved (ground connection).
57	RXD (UART)	O	Communication with master control IC (IC801) and UART receive output.
58	TXD (UART)	I	Communication with master control IC (IC801) and UART send input.
59	RTS (T)	I	UART send request input from master control IC (IC801).
60	CTS (R)	O	UART send request output to master control IC (IC801).
61	AUBIT0	–	Reserved (“H” level).
62	AUBIT1	–	Reserved (ground connection).
63	CLKSET0	–	Reserved (ground connection).
64	CLKSET1	–	Reserved (ground connection).
65	GND	–	Power supply pin (ground).
66	+3.3V	–	power supply pin (VCC).
67	SCLK	O	Serial clock output to digital signal processor IC (IC201).
68	SWDT	O	Write data signal output to digital signal processor IC (IC121).
69	SRDT	I	Read data signal input from digital signal processor IC (IC121).
70	EMP	O	Delmphasis ON/OFF control signal output.
71	SCK1	–	not used (OPEN).
72	SOUT1	–	not used (OPEN).
73	SIN1	–	not used (OPEN).
74	CSB	–	Reserved (VCC connection).
75	LDON	O	Laser ON/OFF control signal output.
76	PIT/GRV	–	not used (OPEN).
77	FOK	I	Focus OK signal input from digital signal processor IC (IC121).
78		–	not used (OPEN).
79	LOCK	–	not used (OPEN).
80	WRPWR	O	Laser power switch signal output to digital signal processor IC (IC121).
81	DIG-RST	O	Reset signal output.
82		–	not used (OPEN).
83	DA-RST	O	Reset signal output to D/A and A/D converters “L”: reset.
84	DSEL-A	–	not used (OPEN).
85	DSEL-B	–	not used (OPEN).
86	MOD	O	MD module ON/OFF control signal output.
87	REC/PB	–	not used (OPEN).
88		–	not used (OPEN).
89	SCTX	O	Record data output authorization signal output.
90	XLATCH	O	Serial latch signal output to digital signal processor IC (IC121).
91		–	not used (OPEN).
92		–	not used (OPEN).
93	AMUTE	–	not used (OPEN).
94	LD OUT	O	Loading motor F control signal output.
95	LD IN	O	Loading motor F control signal output.
96	LIMIT IN	I	Detection input from limit switch (S681).
97	PROTECT	I	Record tab detection input from disk write-protect switch (S683).
98	REFLECT	I	Disk reflection rate detection input from reflect switch (S682).
99	GND	–	Power supply terminal (ground).
100	+3.3V	–	Power supply terminal (VCC).





6-3. BLOCK DIAGRAM (MD SECTION)



- **Circuit Boards Location**

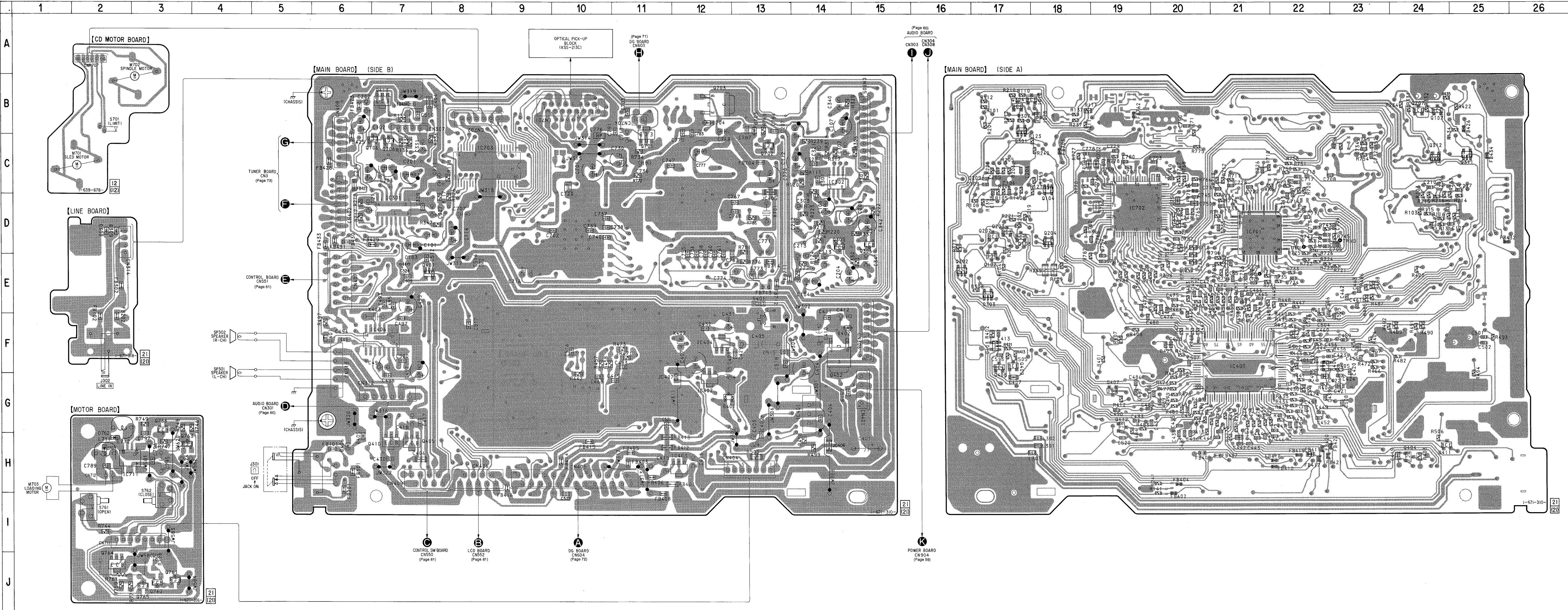


- Signal path.
 -  : MD PLAY
 -  : MD REC
 -  : CD

6-4. PRINTED WIRING BOARDS – MAIN SECTION – ● Refer to page 42 for Circuit Boards Location.

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D308	D-2	Q203	D-17
D309	D-2	Q204	D-18
D401	G-12		
D402	F-14	Q206	C-7
D405	H-6	Q207	B-24
		Q301	B-17
D406	H-6	Q302	E-16
D407	G-17	Q303	E-17
D701	C-18		
D702	C-19	Q304	B-17
D703	B-13	Q305	D-14
		Q306	D-15
D704	B-12	Q311	C-25
D761	H-2	Q312	C-24
D762	H-2		
		Q401	E-7
		Q402	F-14
IC301	D-7	Q403	F-17
IC302	C-14	Q404	H-24
IC401	G-14	Q405	H-7
IC402	H-12		
		Q406	F-22
		Q407	G-19
IC404	F-12	Q408	F-17
IC405	F-21	Q409	F-17
IC701	D-21	Q410	H-7
IC702	D-19		
IC703	C-8	Q411	H-24
		Q412	G-19
IC711	H-2	Q413	B-7
		Q701	C-11
		Q702	C-13
Q101	B-18	Q703	B-12
Q102	E-17	Q761	J-3
Q103	D-17	Q762	J-3
Q104	C-18	Q763	H-3
Q106	C-6	Q764	J-2
Q107	B-24		
Q201	B-18	Q765	J-3
Q202	D-17	Q766	G-3



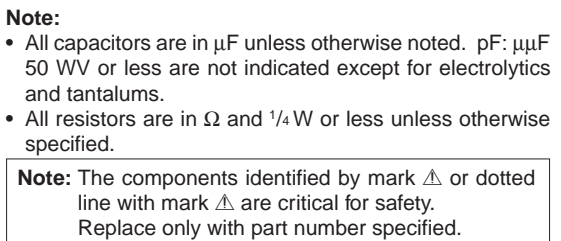
Note:




- : parts extracted from the component side.
- : Through hole.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:

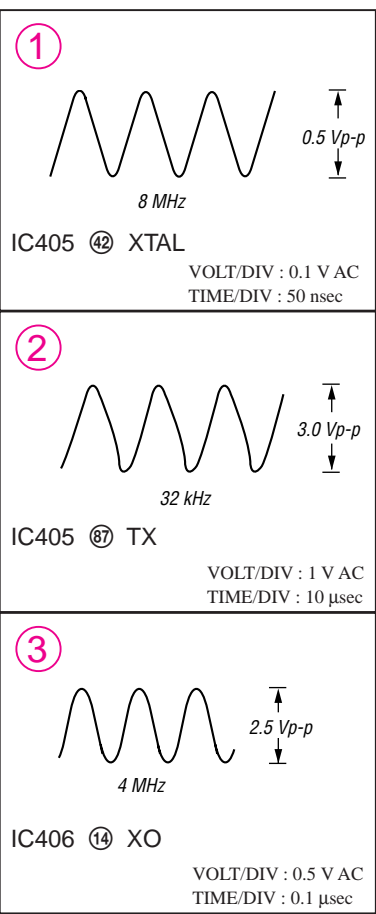
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated. (Side B)

Parts face side: Parts on the parts face side seen from the parts face are indicated. (Side A)



-  : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD STOP
() : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
 : CD

● Waveforms – Main Section (2/3) –

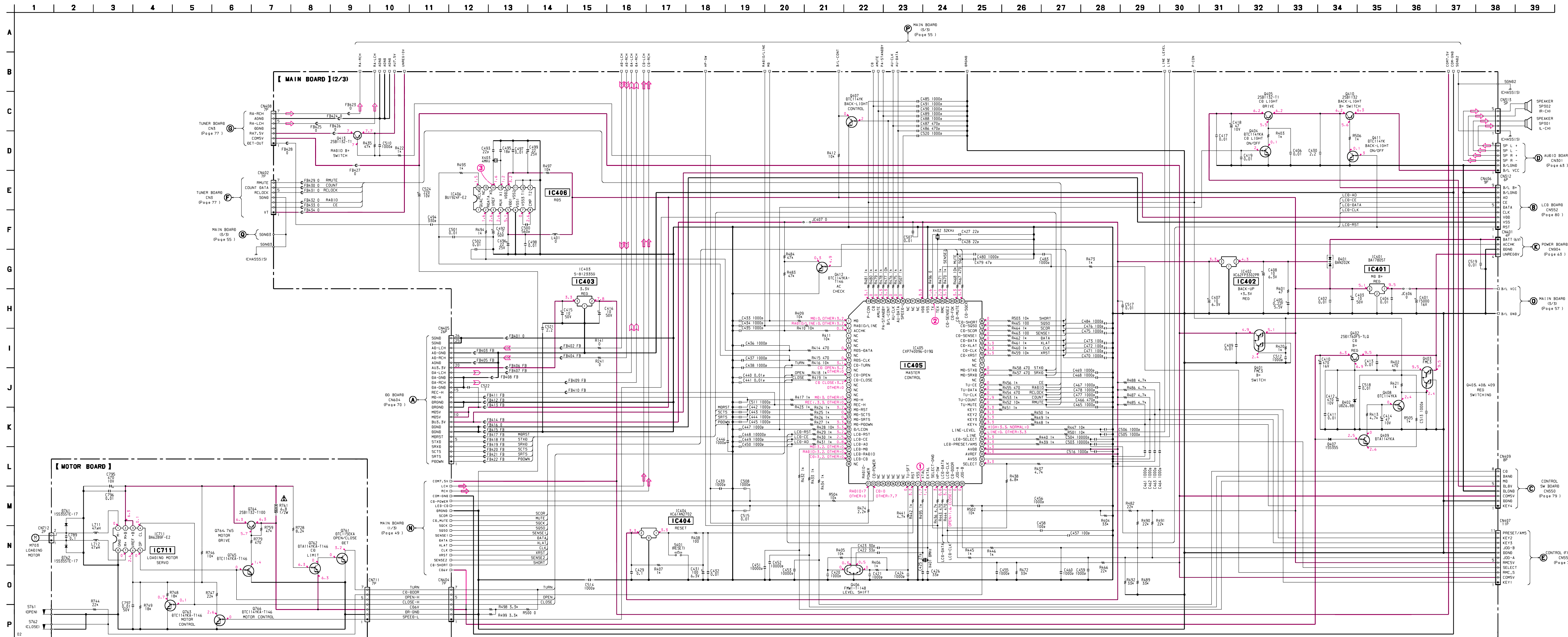


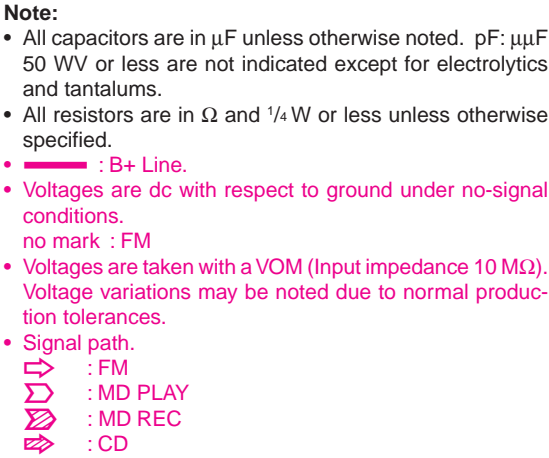
Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- \triangle : fusible resistor.

Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

- --- : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions. no mark : FM
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - \rightarrow : FM
 - \rightarrow : MD PLAY
 - \rightarrow : MD REC
 - \rightarrow : CD





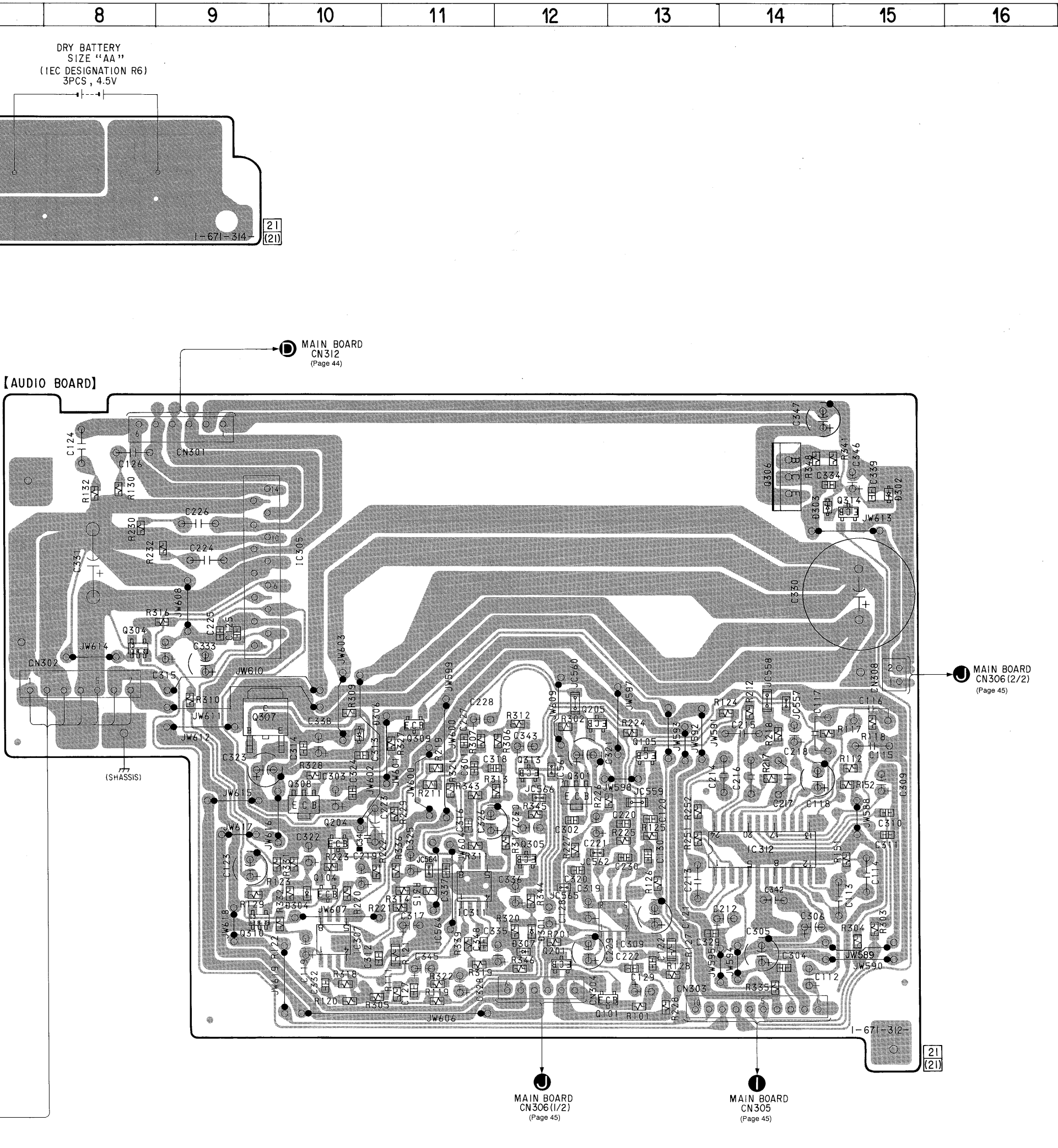
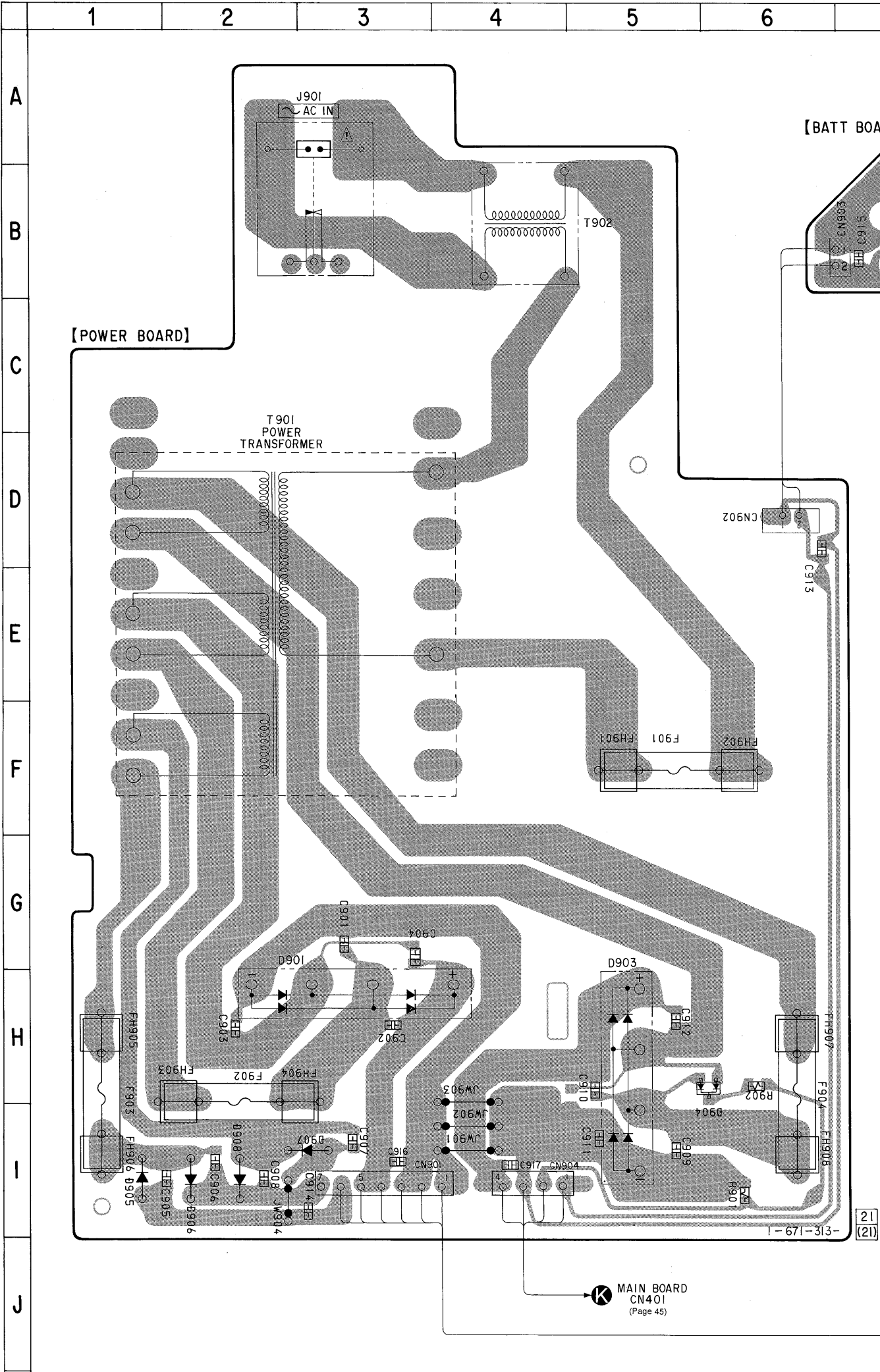
● Semiconductor Location

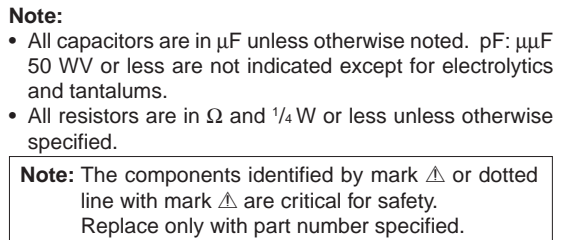
Ref. No.	Location
D301	I-12
D302	E-15
D303	E-14
D304	H-10
D306	G-10
D307	I-12
D901	H-2
D903	H-5
D904	H-5
D905	I-1
D906	I-2
D907	I-3
D908	I-2
IC305	E-9
IC307	I-10
IC309	H-13
IC311	H-11
IC312	H-14
Q101	I-12
Q104	H-10
Q105	G-13
Q201	I-12
Q204	H-10
Q205	G-12
Q301	G-12
Q304	F-8
Q305	H-12
Q306	D-14
Q307	G-9
Q308	G-10
Q309	G-11
Q310	H-9
Q313	G-12
Q314	E-15



Note:

- : parts extracted from the component side.
- : Pattern from the side which enables seeing.

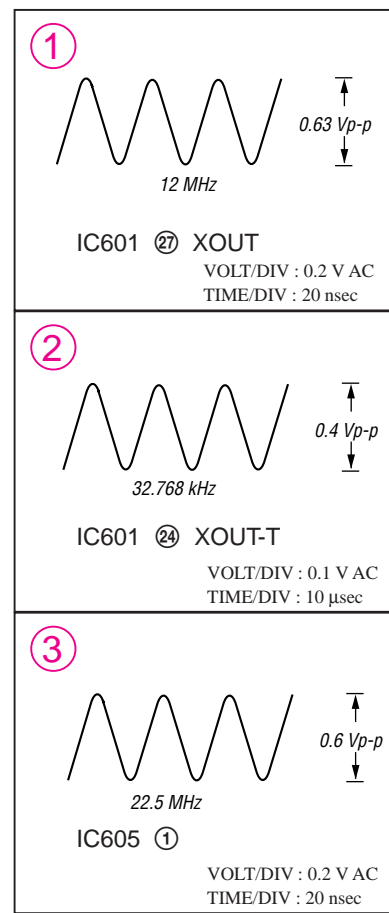
(The other layers' patterns are not indicated.)



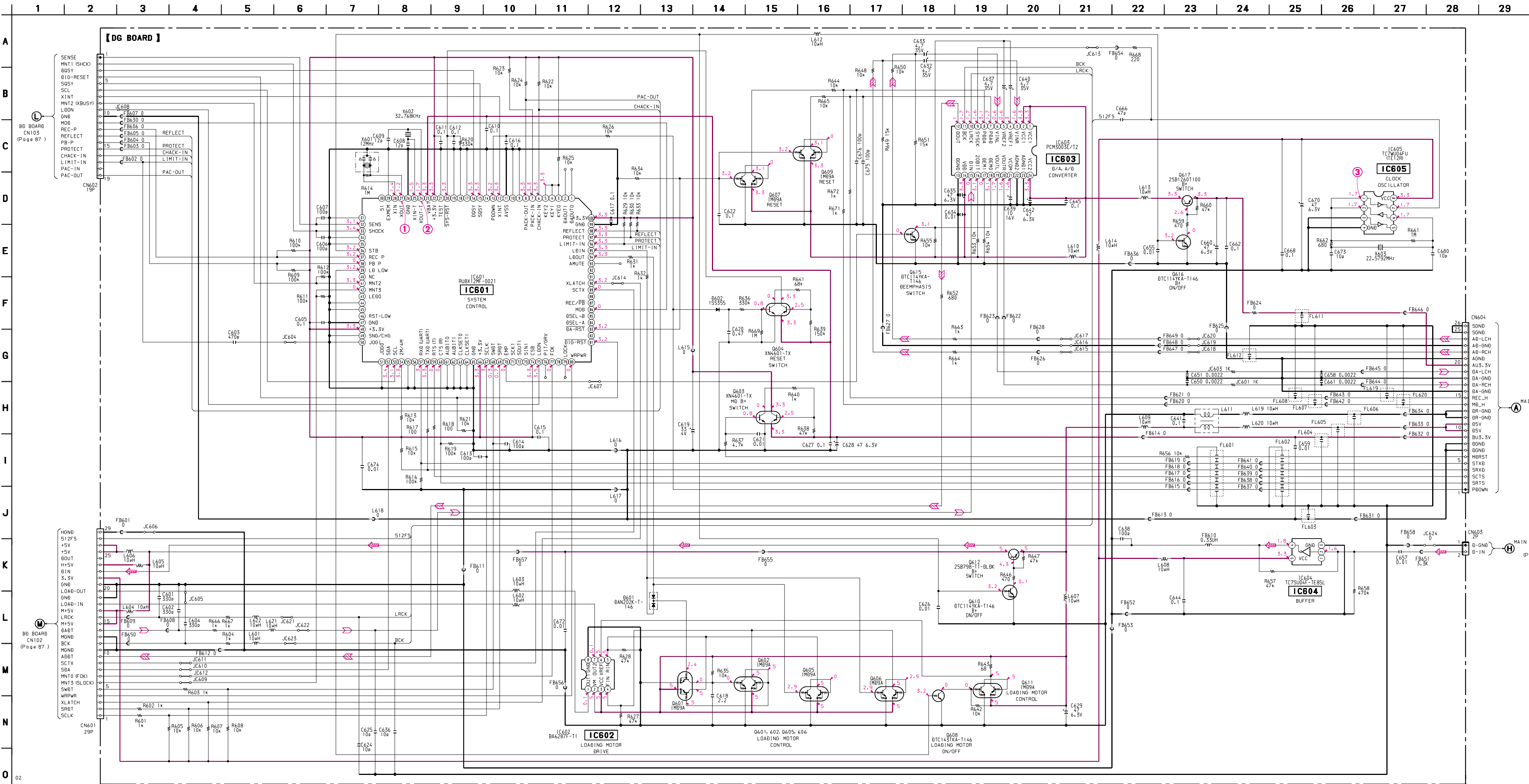


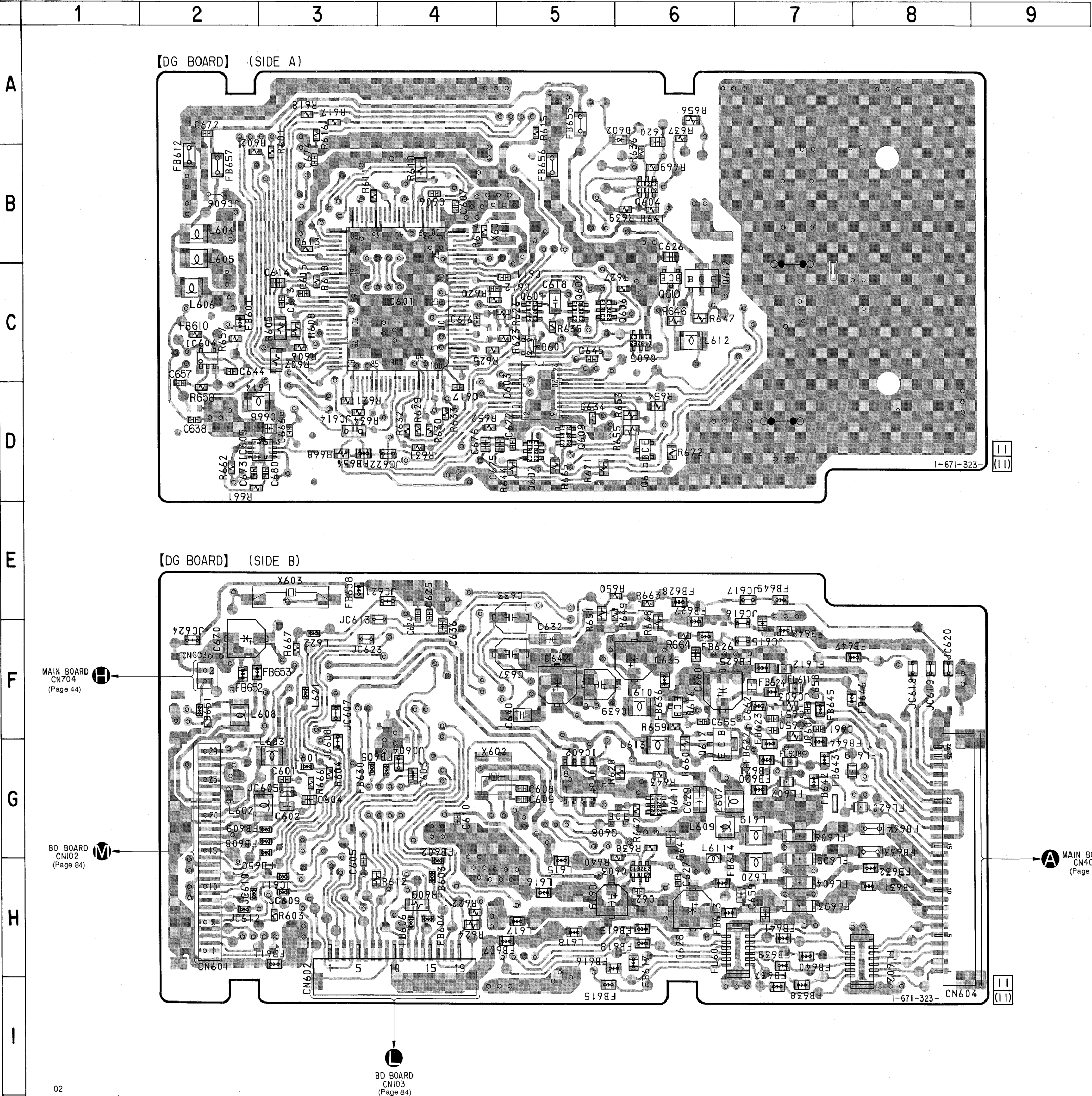
-  : B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
no mark : FM
- Voltages are taken with a VOM (Input impedance 10 M Ω).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 : FM

● Waveforms – DG Section –



- Note:**
- All capacitors are in μF unless otherwise noted. pF: pμF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4 W or less unless otherwise specified.
 - △ : internal component.
 - B+ Line.
 - Voltages and waveforms are dc with respect to ground under no-signal conditions.
 - no mark : MD STOP
 - Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with an oscilloscope.
 - Circled numbers refer to waveforms.
 - Signal path.
 - MD PLAY
 - MD REC
 - CD





• Semiconductor Location

Ref. No.	Location
D601	C-5
D602	A-6
IC601	C-4
IC602	G-5
IC603	D-5
IC604	C-2
IC605	D-2
Q601	C-5
Q602	C-5
Q603	H-6
Q604	B-6
Q605	C-6
Q606	C-5
Q607	D-5
Q608	G-5
Q609	D-5
Q610	C-6
Q611	G-6
Q612	C-6
Q615	D-6
Q616	F-6
Q617	G-6

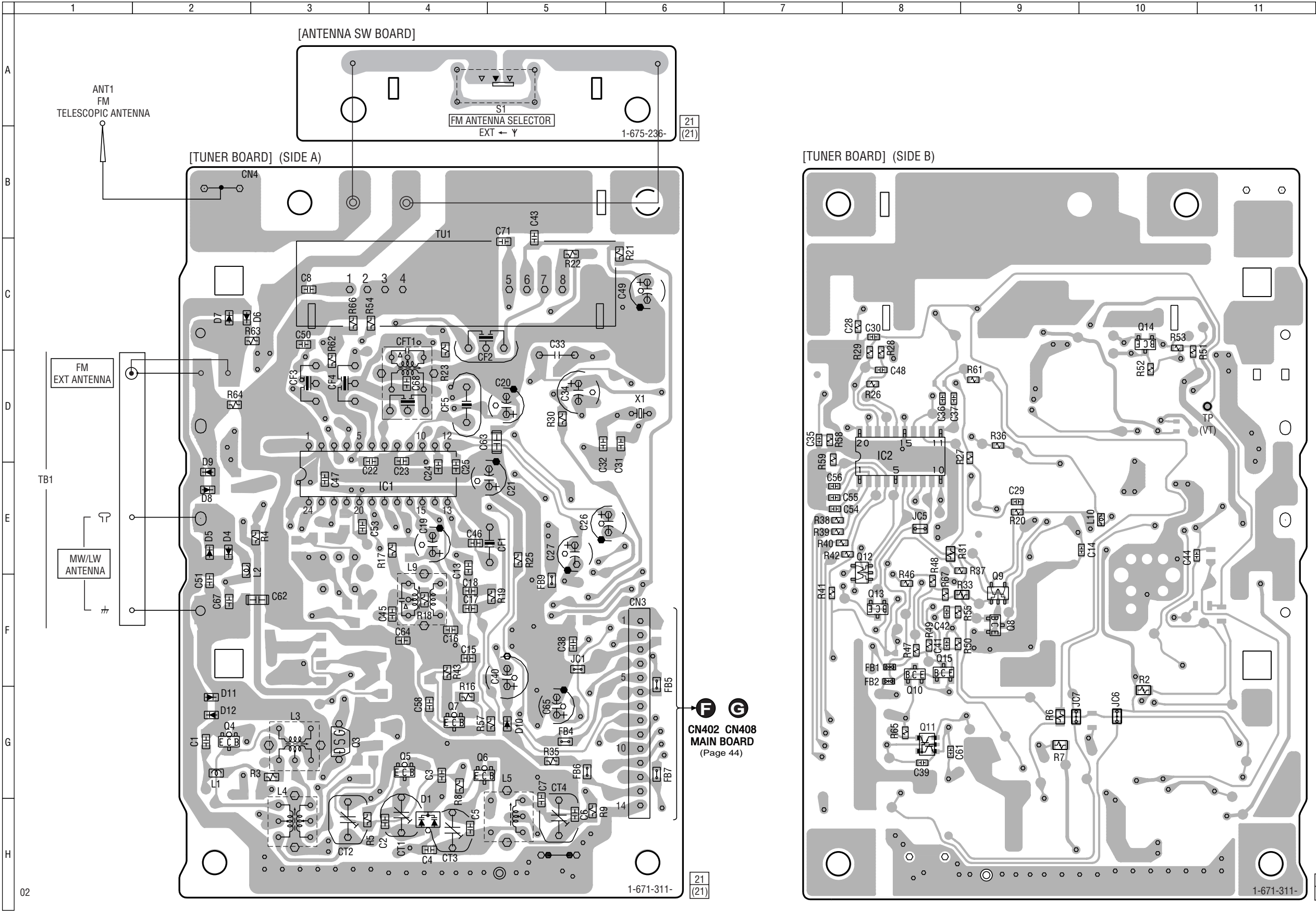
Note:

- : parts extracted from the component side.
- ○ : Through hole.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:

Pattern face side:	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side:	Parts on the parts face side seen from the parts face are indicated.

6-12. PRINTED WIRING BOARDS – TUNER SECTION – ● Refer to page 42 for Circuit Boards Location.



● Semiconductor Location

Ref. No.	Location
D1	H-4
D4	E-2
D5	E-2
D6	C-2
D7	C-2
D8	E-2
D9	E-2
D10	G-5
D11	G-2
D12	G-2
IC1	E-4
IC2	D-8
Q3	G-3
Q4	G-2
Q5	G-4
Q6	G-4
Q7	G-4
Q8	F-9
Q9	F-9
Q10	F-8
Q11	G-8
Q12	E-8
Q13	F-8
Q14	C-10
Q15	F-8

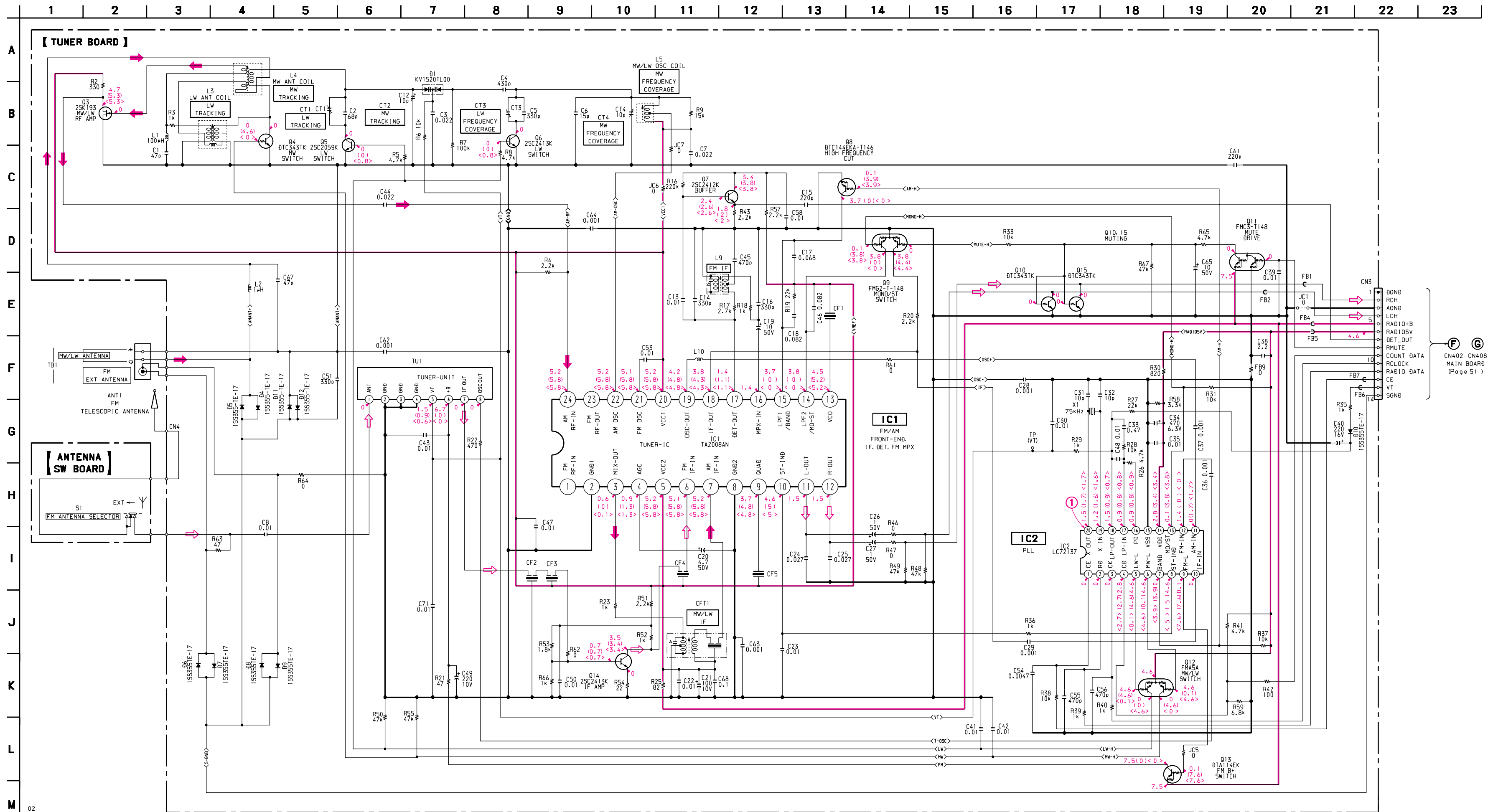
Note:

- : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

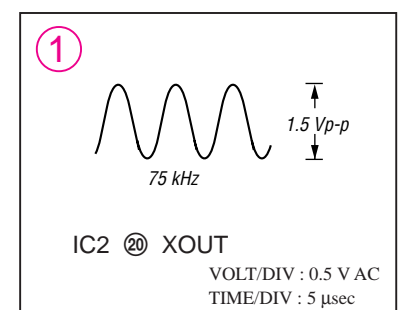
Caution:

Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

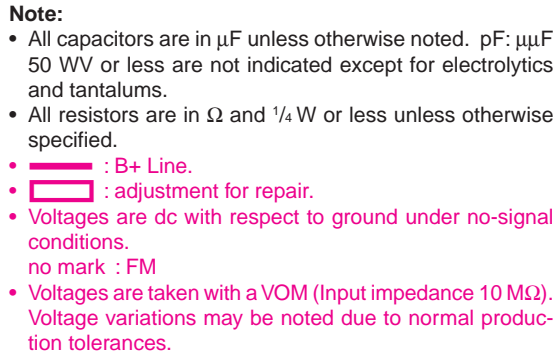
6-13. SCHEMATIC DIAGRAM – TUNER SECTION – • Refer to page 94 for IC Block Diagrams.

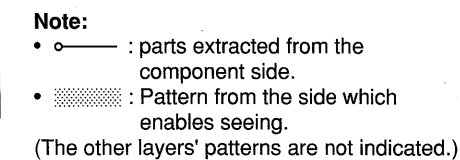


• Waveform – Tuner Section –

**Note:**

- All capacitors are in μF unless otherwise noted. pF: μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : B+ Line.
- \square : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : MW
- < : LW
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
- \rightarrow : FM
- \rightarrow : MW/LW







● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	E-4	IC101	E-13
D181	C-9	IC103	B-13
D183	C-9	IC121	D-11
		IC122	C-5
		IC123	D-10
		IC124	E-11
		IC152	B-11
		IC171	E-9
		IC181	D-9
		IC192	F-7
Q101	C-13		
Q102	B-14		
Q103	B-13		
Q104	B-13		
Q162	B-13		
Q163	B-14		
Q180	C-7		
Q181	C-9		
Q182	C-9		

Note on Printed Wiring Boards:

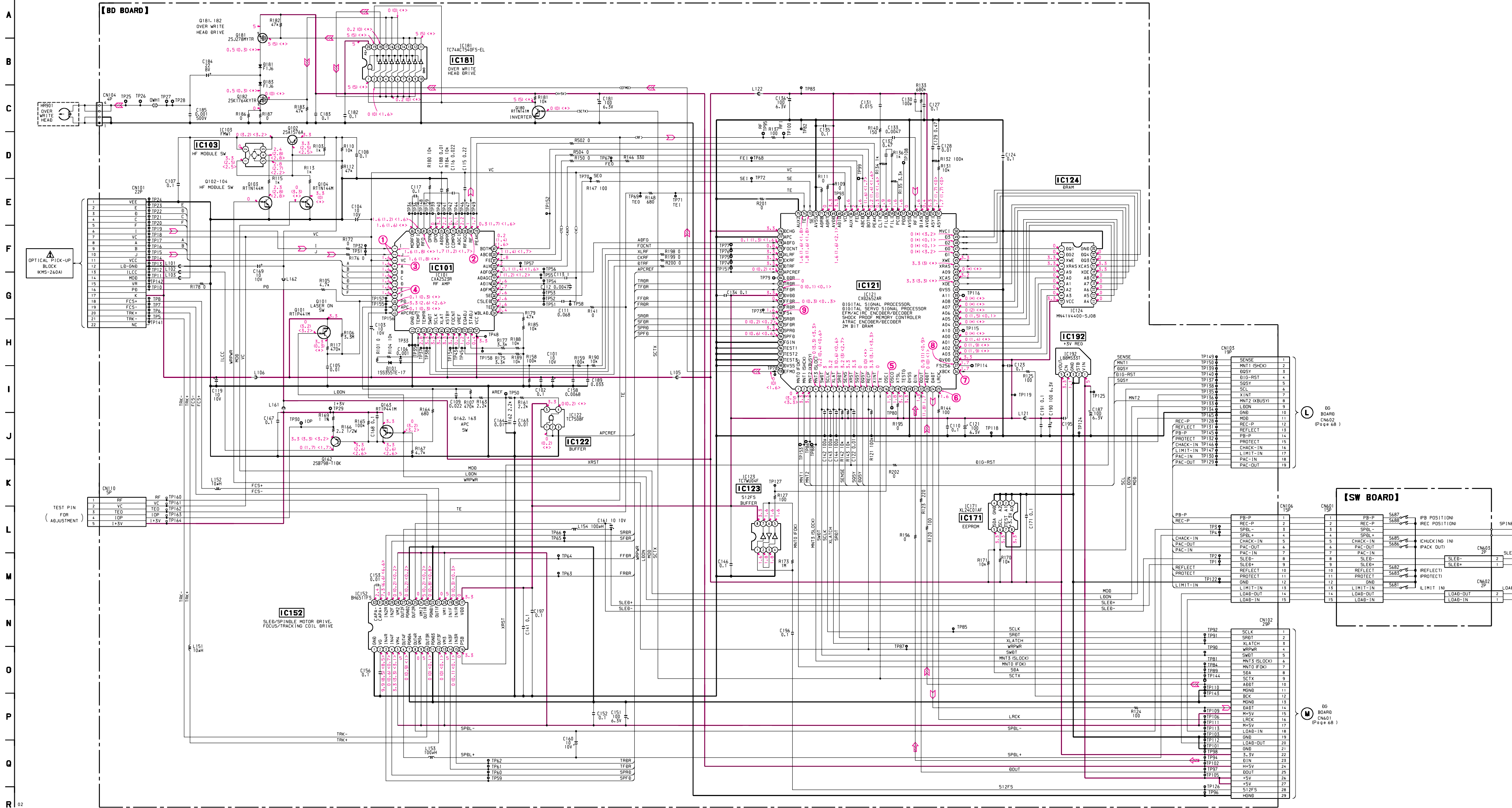
- Note:**
- : parts extracted from the component side.
 - : Through hole.
 - ▨ : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

Caution:
Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.
Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.

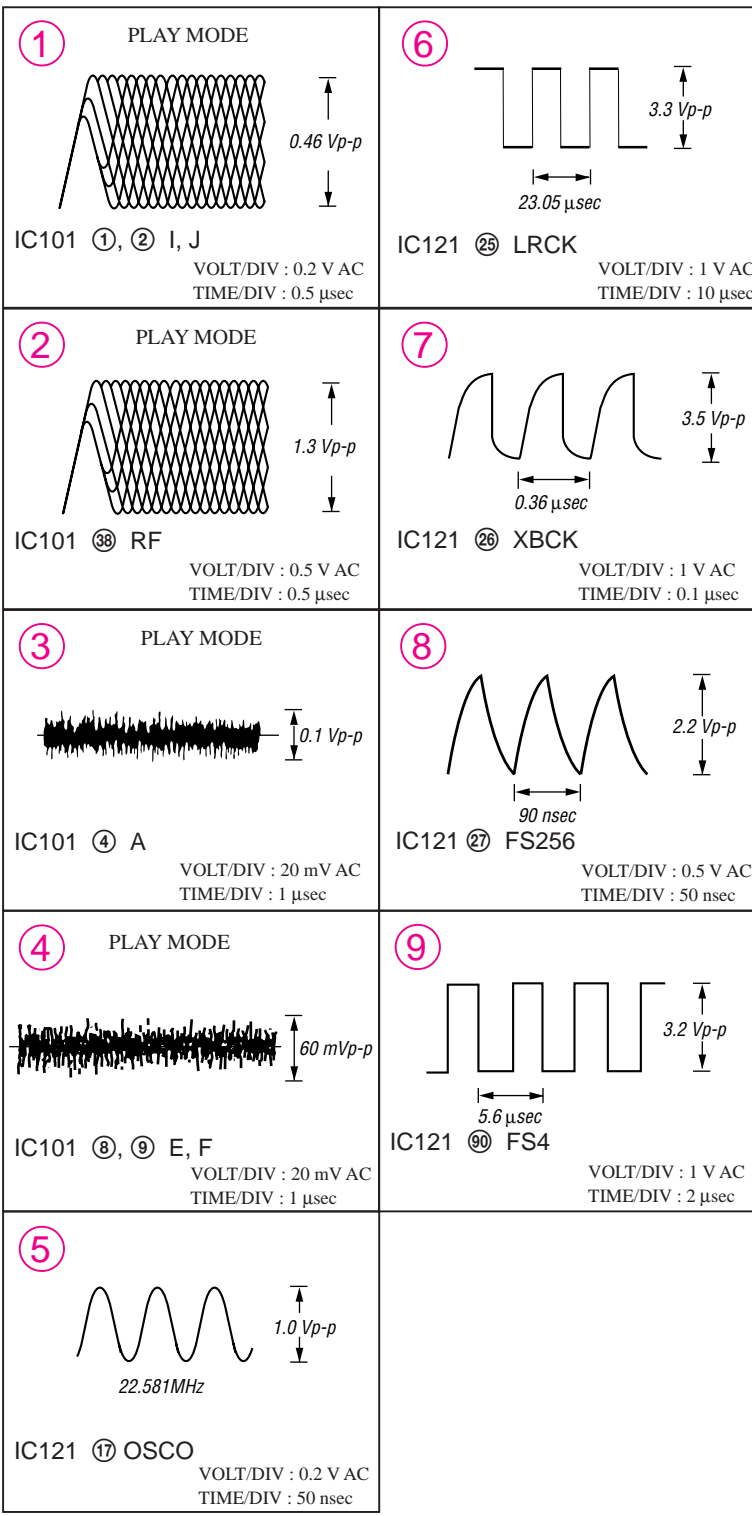
Note on Schematic Diagram:

- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
 - % : indicates tolerance.
- Note:** The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

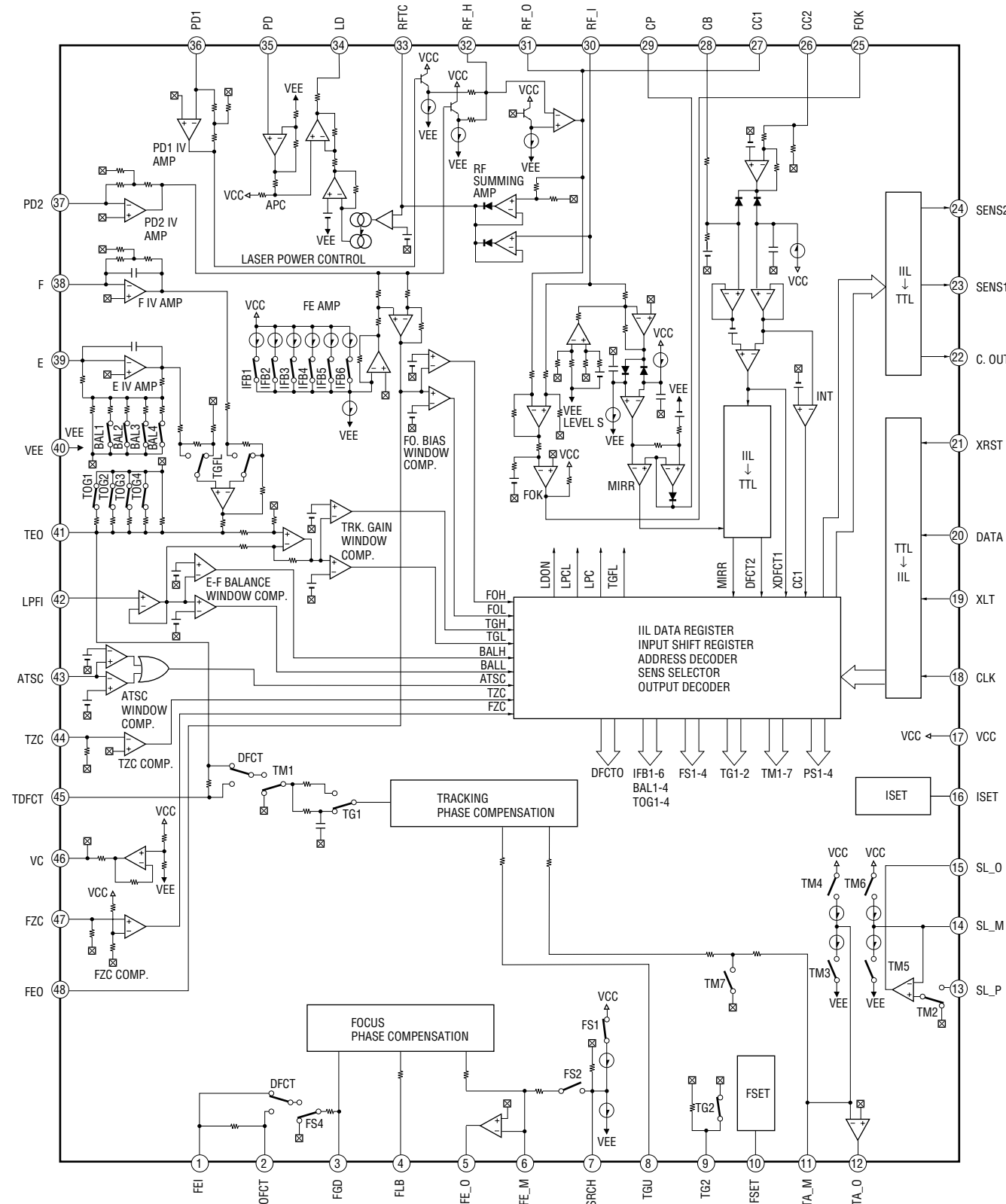
- : B+ Line.
- Voltagess and waveforms are dc with respect to ground under no-signal conditions.
no mark : MD STOP
() : MD PLAY
< : MD REC
* : Impossible to measure
- Voltagess are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
 - ▨ : MD PLAY
 - ▨ : MD REC
 - ▨ : CD



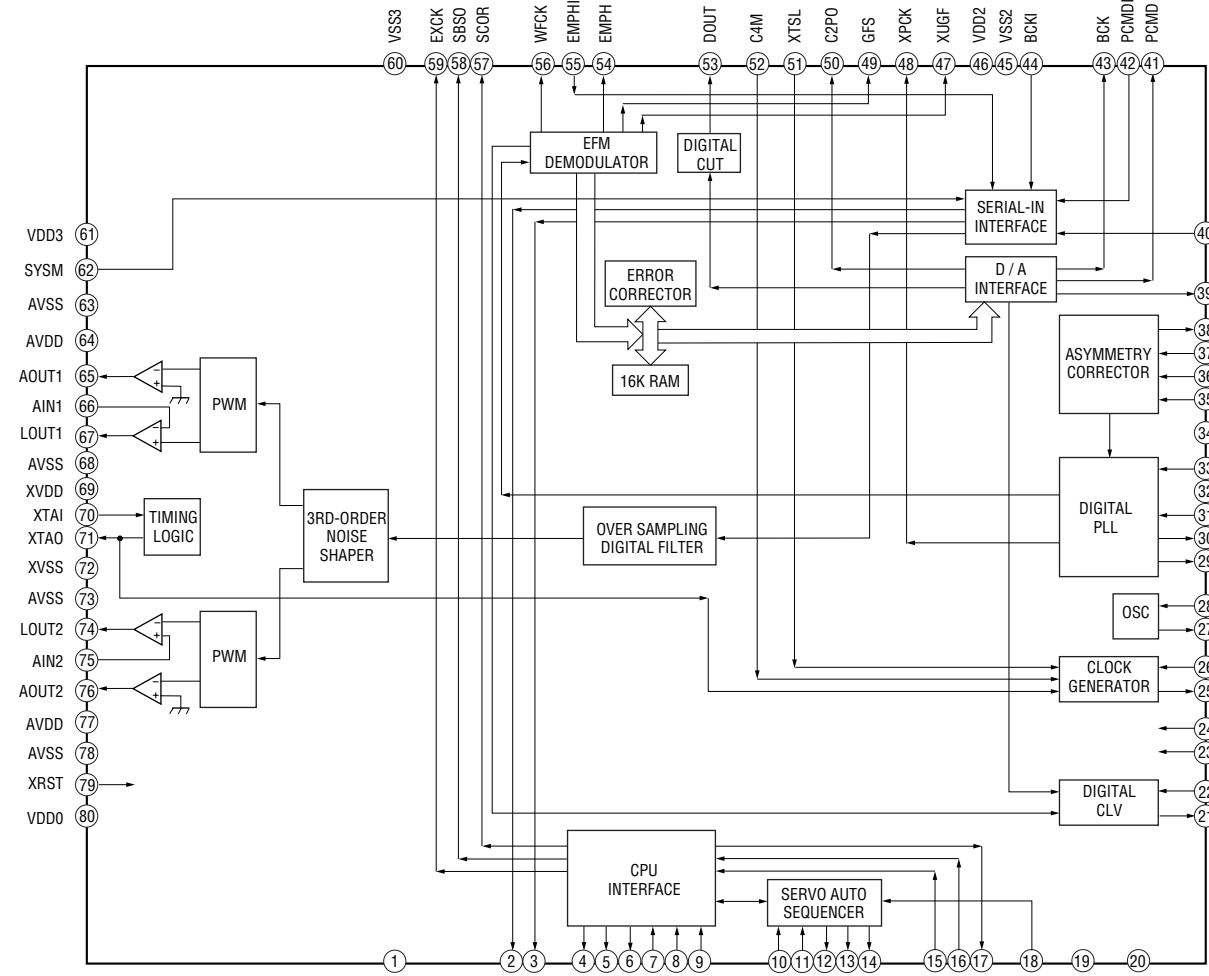
● Waveforms – BD Section –



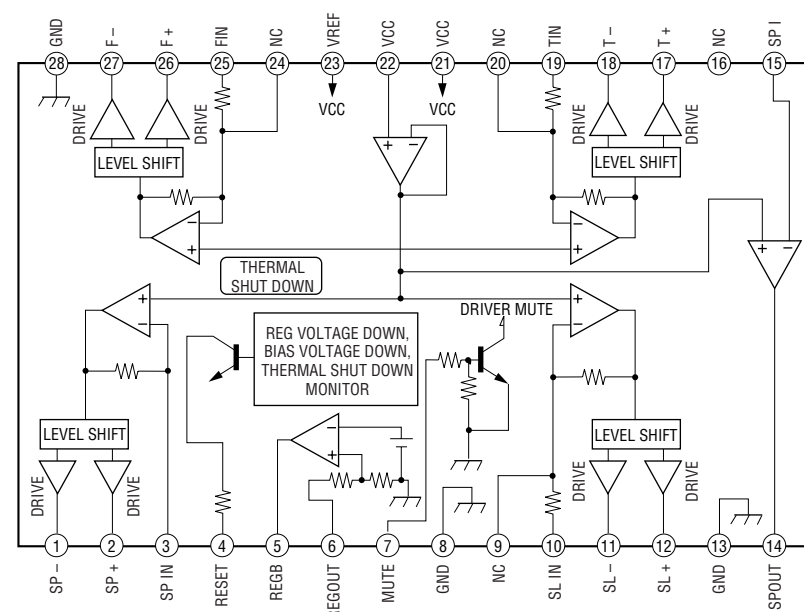
● IC Block Diagrams – Main Section –
IC701 CXA2542AQ



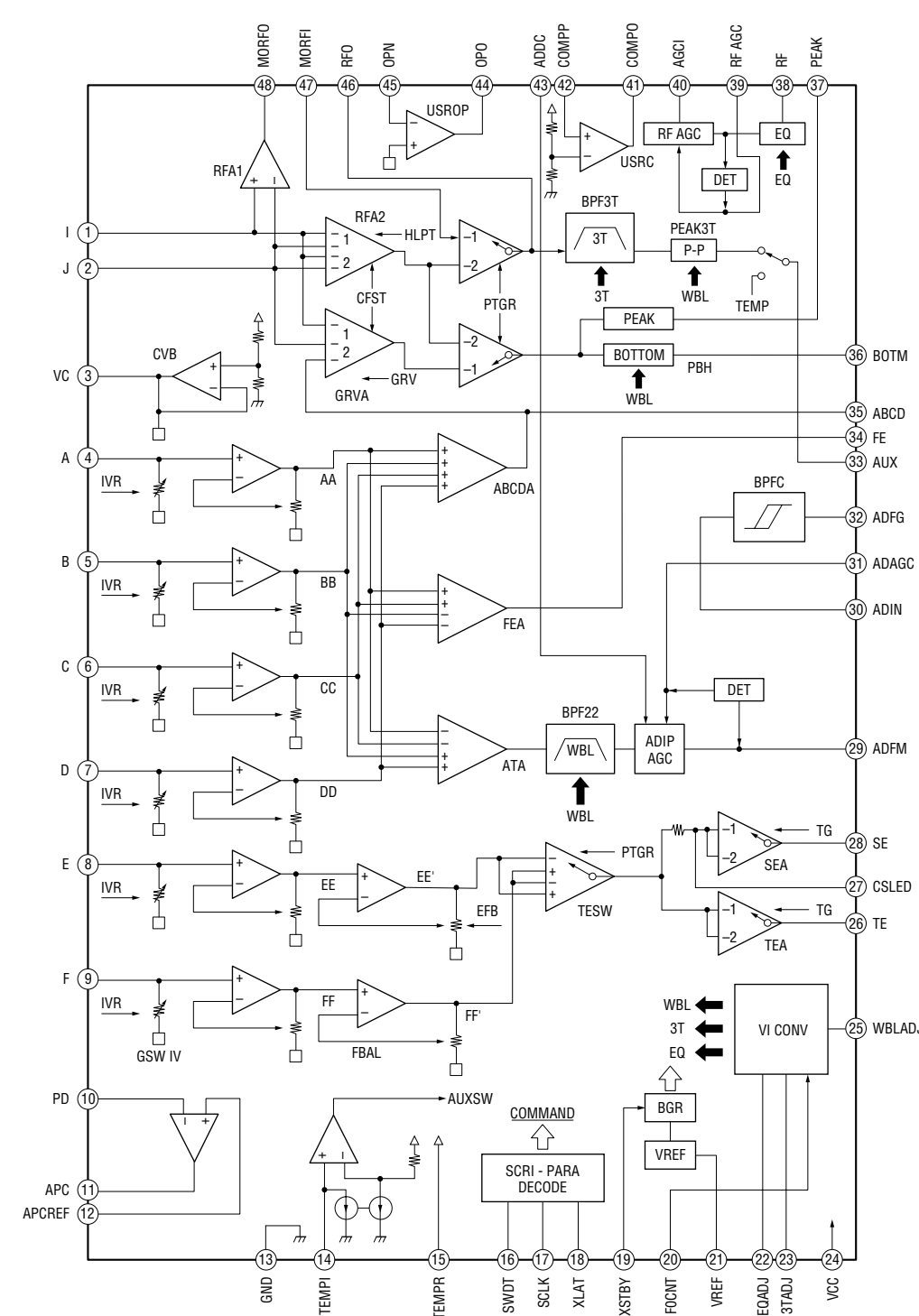
IC702 CXD3009Q



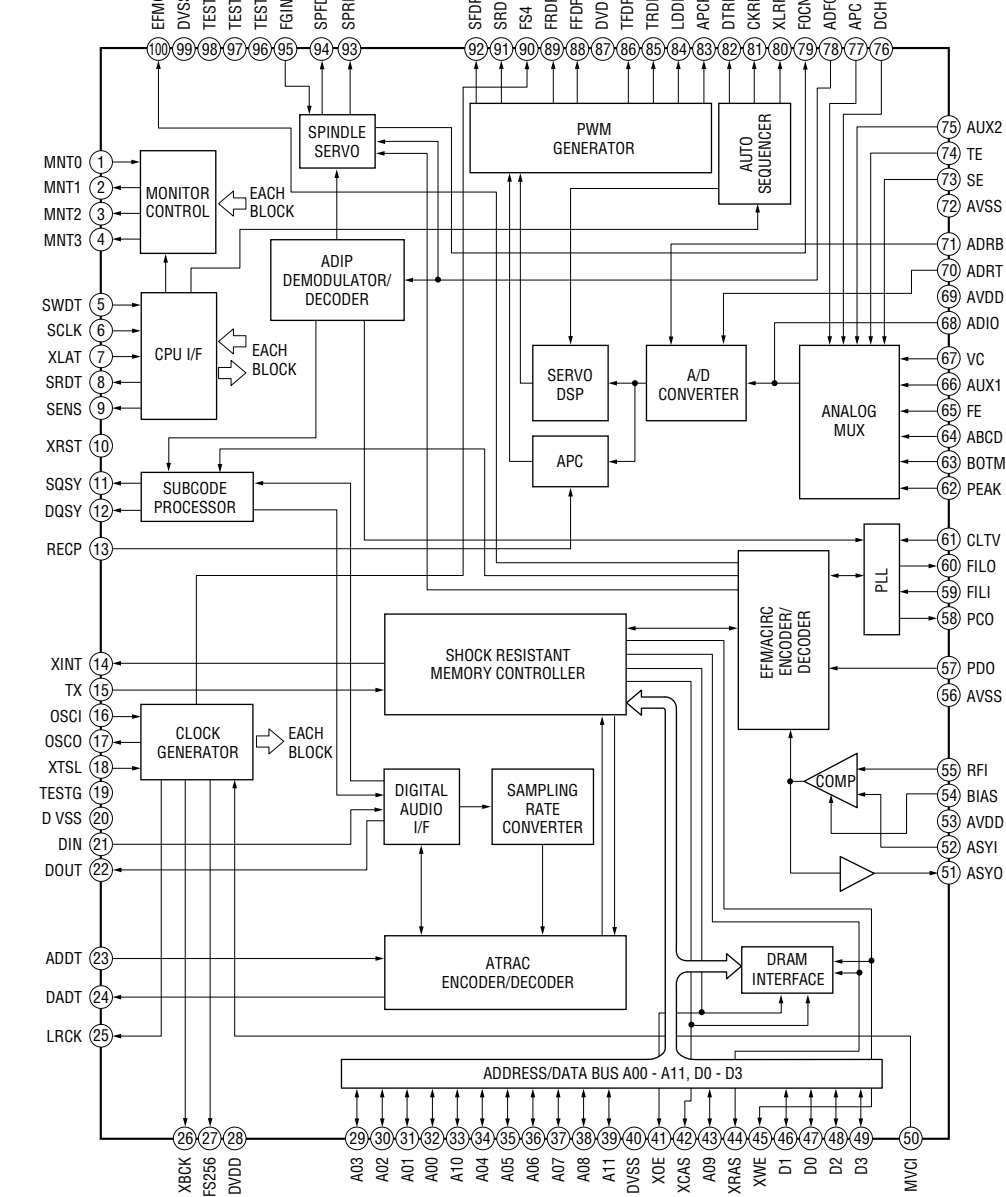
IC703 BA6898FP-E2



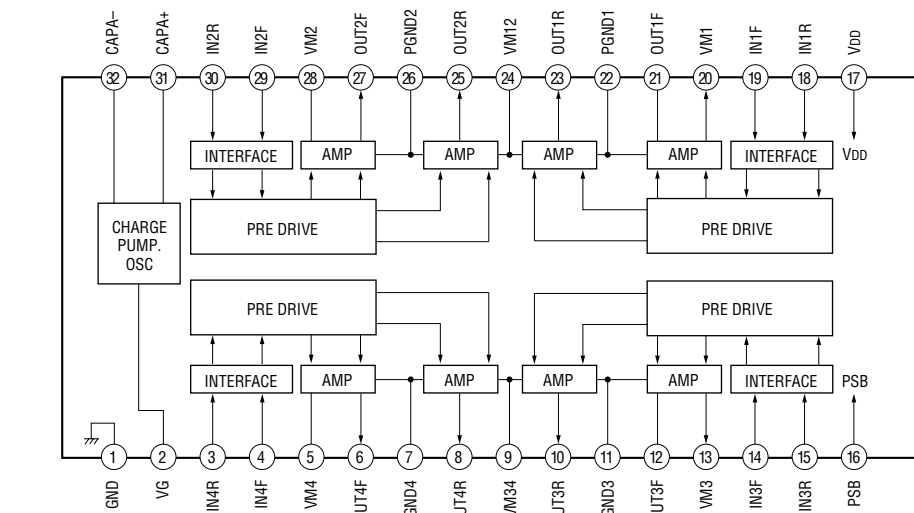
● IC Block Diagrams – BD Section –
IC101 CXD2523R



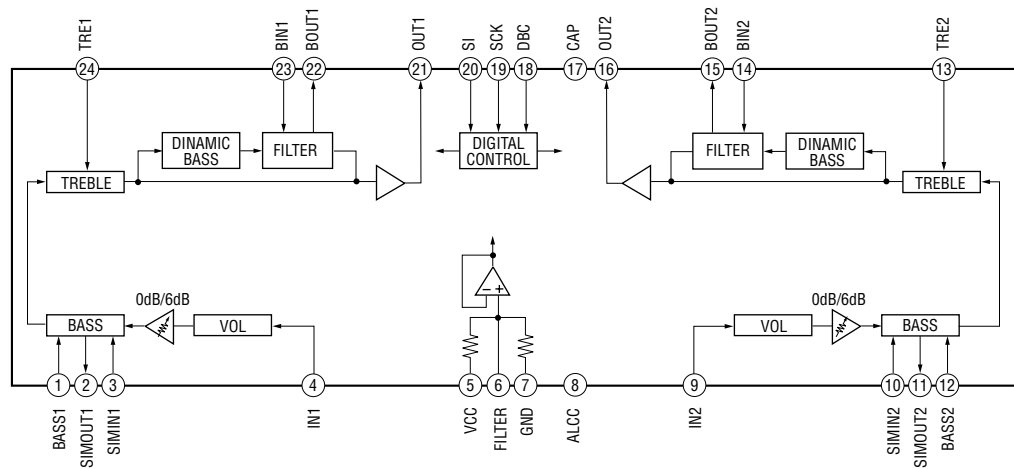
IC121 CXD2652AR



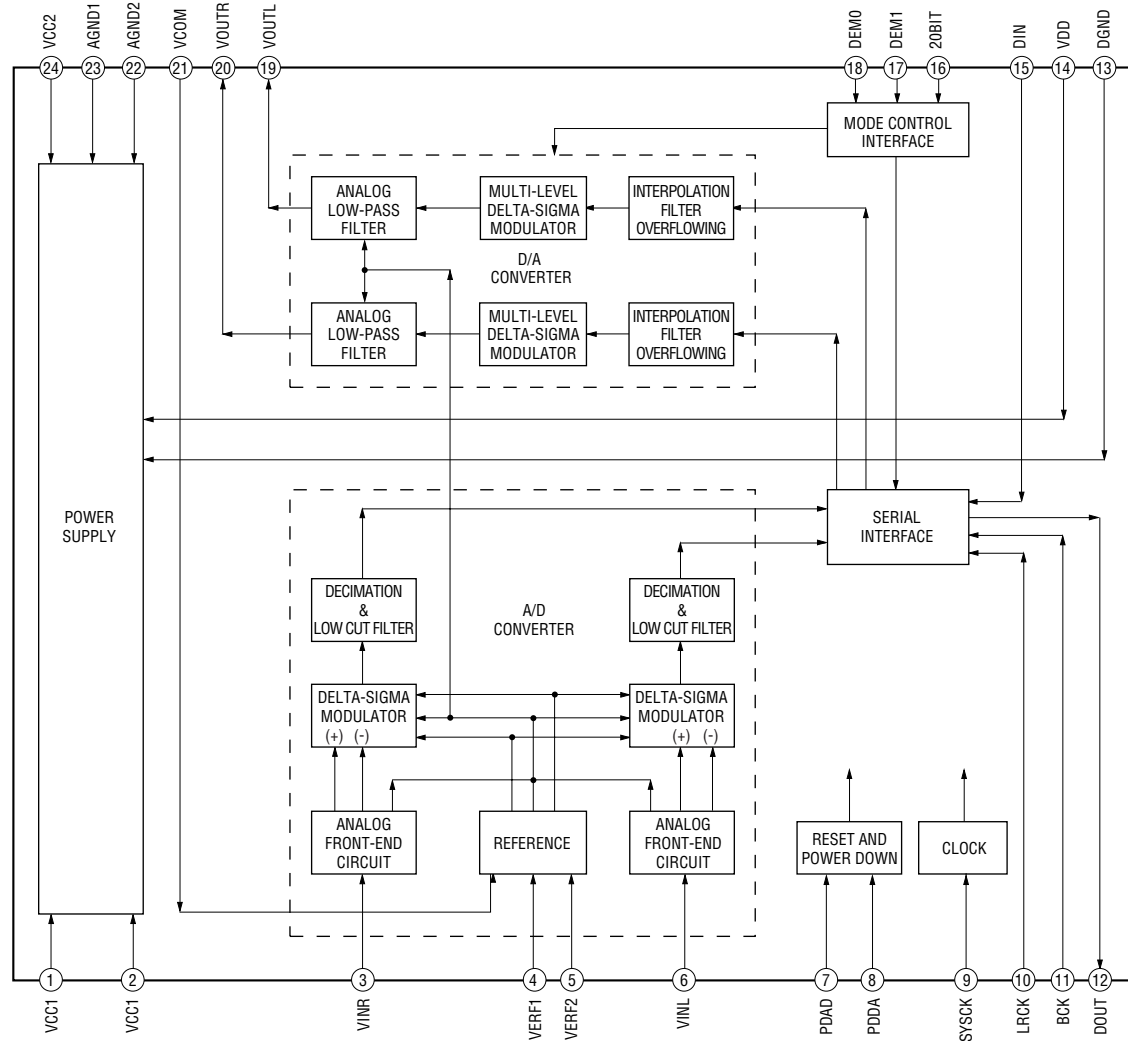
IC152 BH6511FS



● IC Block Diagram – Audio Section –
IC312 BH3863F-E2

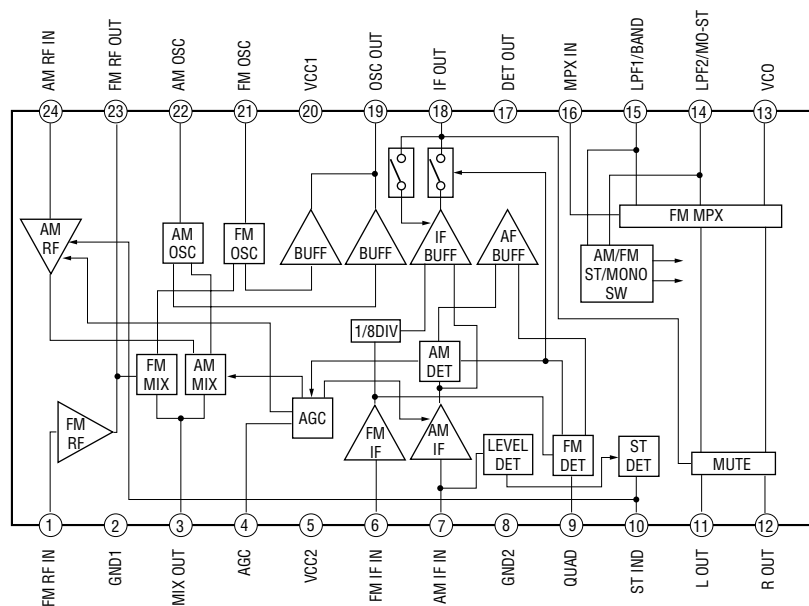


● IC Block Diagram – DG Section –
IC603 PCM3003E/T2

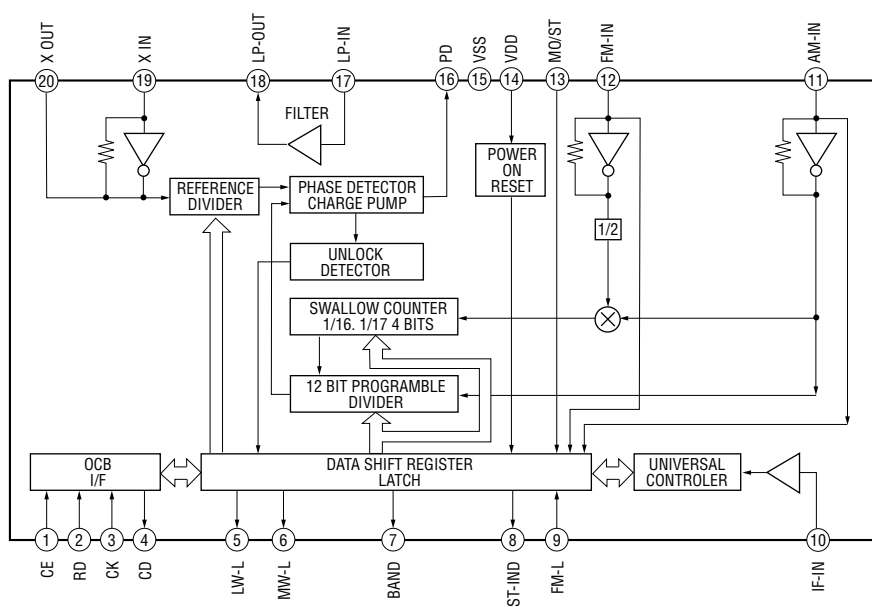


• IC Block Diagrams – Tuner Section –

IC1 TA2008AN



IC2 LC72137M-TLM



SECTION 7 EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.

- Color indication of Appearance Parts

Example :

KNOB, BALANCE (WHITE) ... (RED)

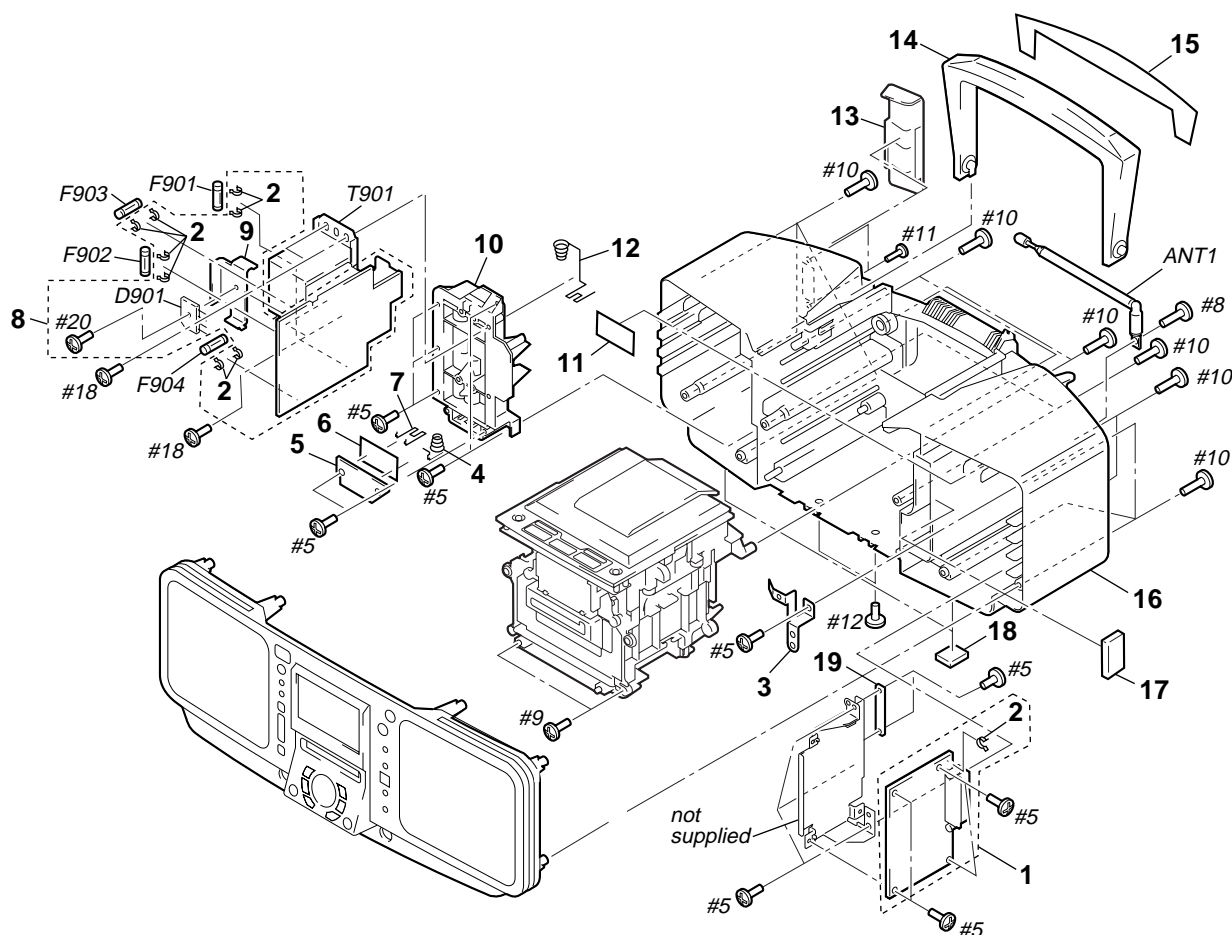
↑ ↑
Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

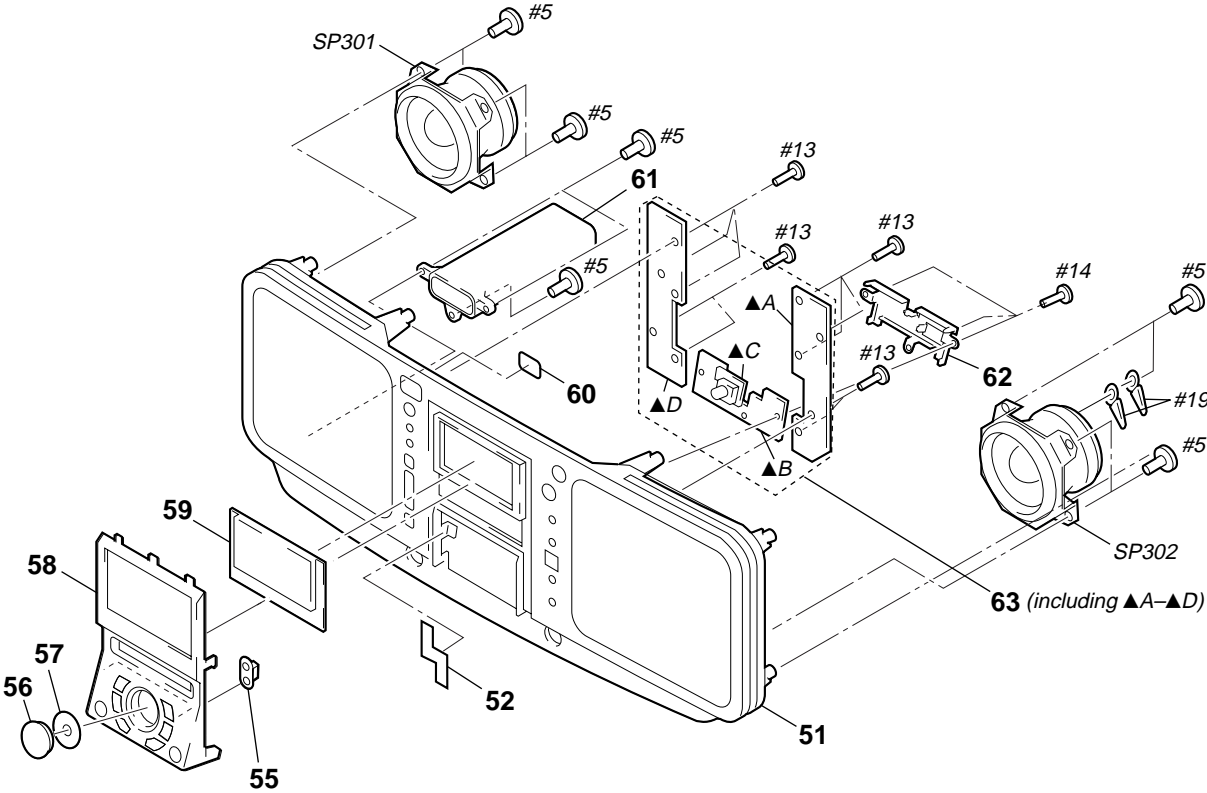
7-1. REAR CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	A-3323-154-A	TUNER BOARD, COMPLETE		15	3-030-768-01	COVER, HANDLE	
2	1-533-217-31	HOLDER, FUSE		16	X-3377-153-1	CABINET (REAR) SUB ASSY	
3	3-027-686-01	TERMINAL BOARD, ANT		17	3-033-657-01	SOUND CUSHION,(1)	
4	3-028-895-01	TERMINAL (-), BATTERY		18	3-029-907-01	FOOT, RUBBER	
* 5	1-671-314-21	BATT BOARD		* 19	1-675-236-21	ANTENNA SW BOARD	
6	3-031-100-01	PACKING (BATTERY)		ANT1	1-754-023-11	ANTENNA, TELESCOPIC	
7	3-028-894-01	TERMINAL (+), BATTERY					
* 8	1-671-313-21	POWER BOARD		D901	8-719-302-38	DIODE RBV-602-01	
* 9	3-028-880-01	HEATSINK (DIODE)		\triangle F901	1-532-467-51	FUSE (T0.315AL/250V)	
* 10	3-027-669-01	SHASSIS, TRANSFORMER		\triangle F902	1-532-505-51	FUSE (T5AL/250V)	
* 11	3-378-433-01	CUSHION, SARANET		\triangle F903	1-532-499-51	FUSE (T0.4AL/250V)	
12	3-027-681-01	TERMINAL (+/-), BATTERY		\triangle F904	1-532-388-51	FUSE (T2AL/250V)	
13	3-027-673-01	LID,BATTERY CASE		\triangle T901	1-433-781-11	TRANSFORMER, POWER	
14	3-027-670-01	HANDLE					

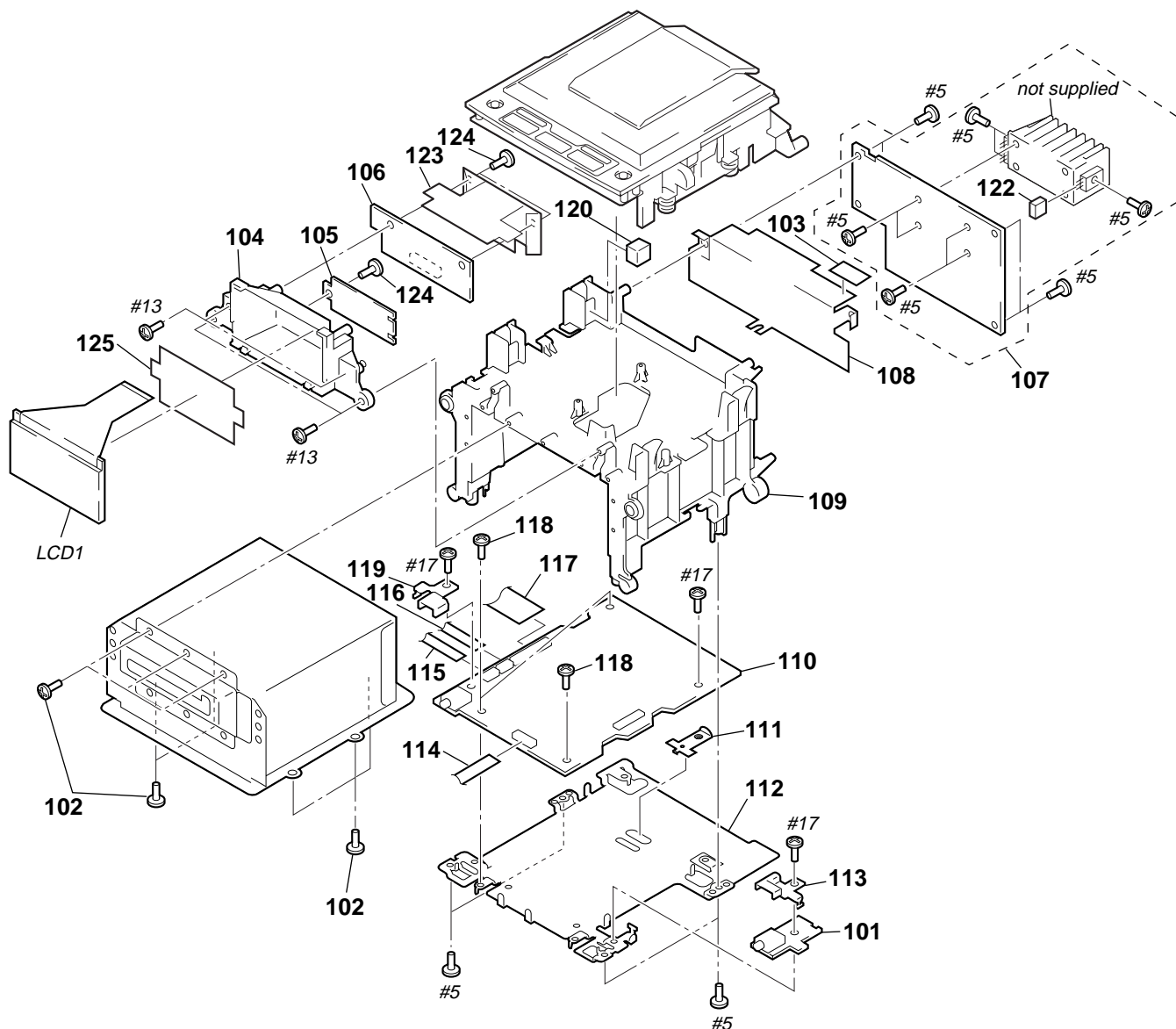
7-2. FRONT CABINET SECTION

- ▲ A : Control (R) board
- ▲ B : Control (F) board
- ▲ C : JOG board
- ▲ D : Control (L) board



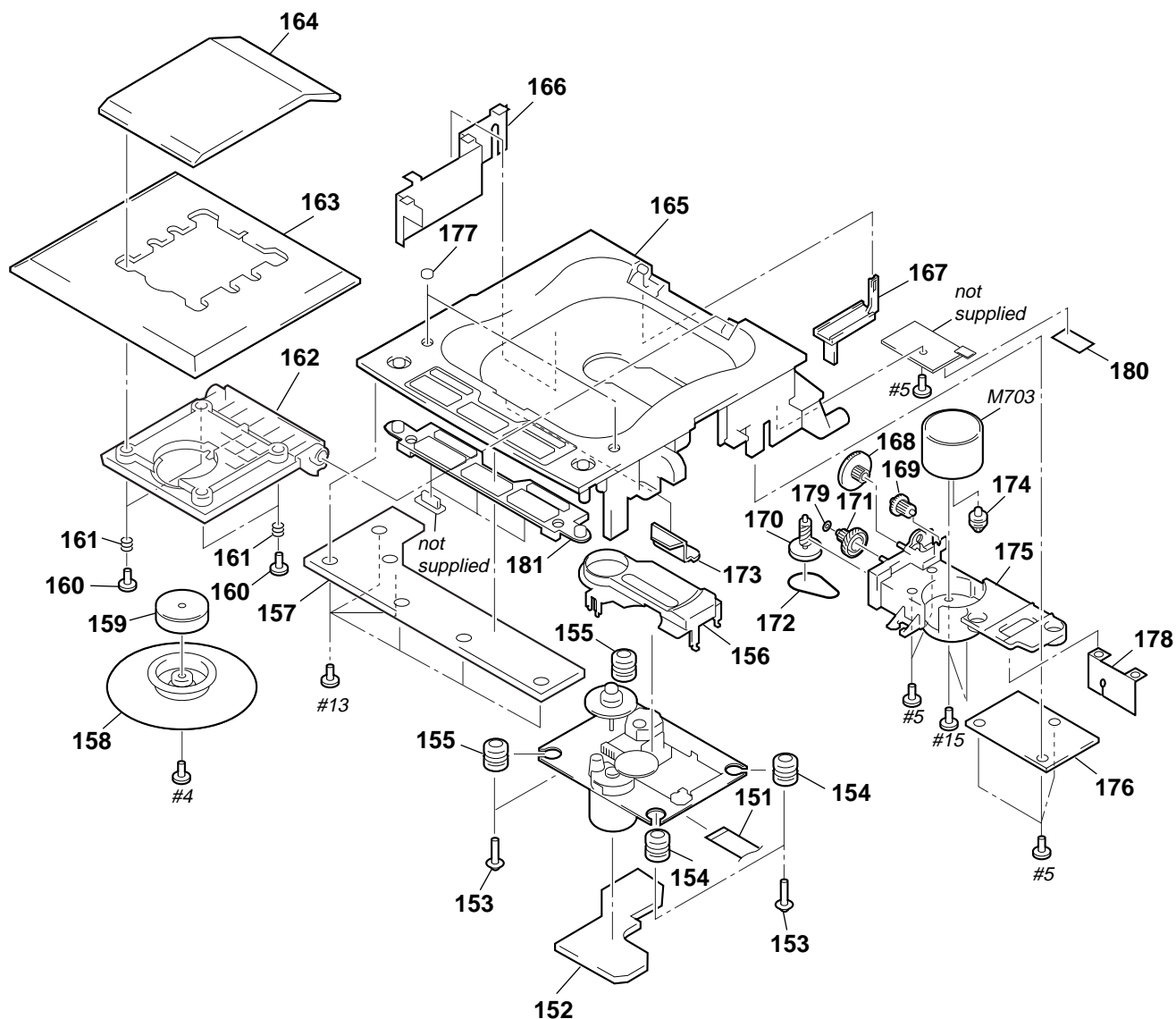
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3377-217-1	CABINET (FRONT) SUB ASSY		60	3-939-014-01	WINDOW, RAY CATCHER	
52	3-032-945-01	SHEET (FRONT), ELECTROSTATIC		61	3-027-659-01	DUCT	
55	3-027-653-01	PLATE (JOG), LIGHT GUIDE		62	3-028-879-01	PLATE (JOG), RETAINER	
56	3-027-660-01	DIAL, JOG					
57	3-031-099-01	SHEET (JOG)		* 63	A-3323-161-A	CONTROL (F) BOARD, COMPLETE	
				SP301	1-505-829-11	SPEAKER (8cm) (L-CH)	
58	X-3376-532-3	FRONT PANEL SUB ASSY		SP302	1-529-130-11	SPEAKER (8cm) (R-CH)	
59	3-027-658-01	WINDOW, LCD					

7-3. CENTER BLOCK SECTION



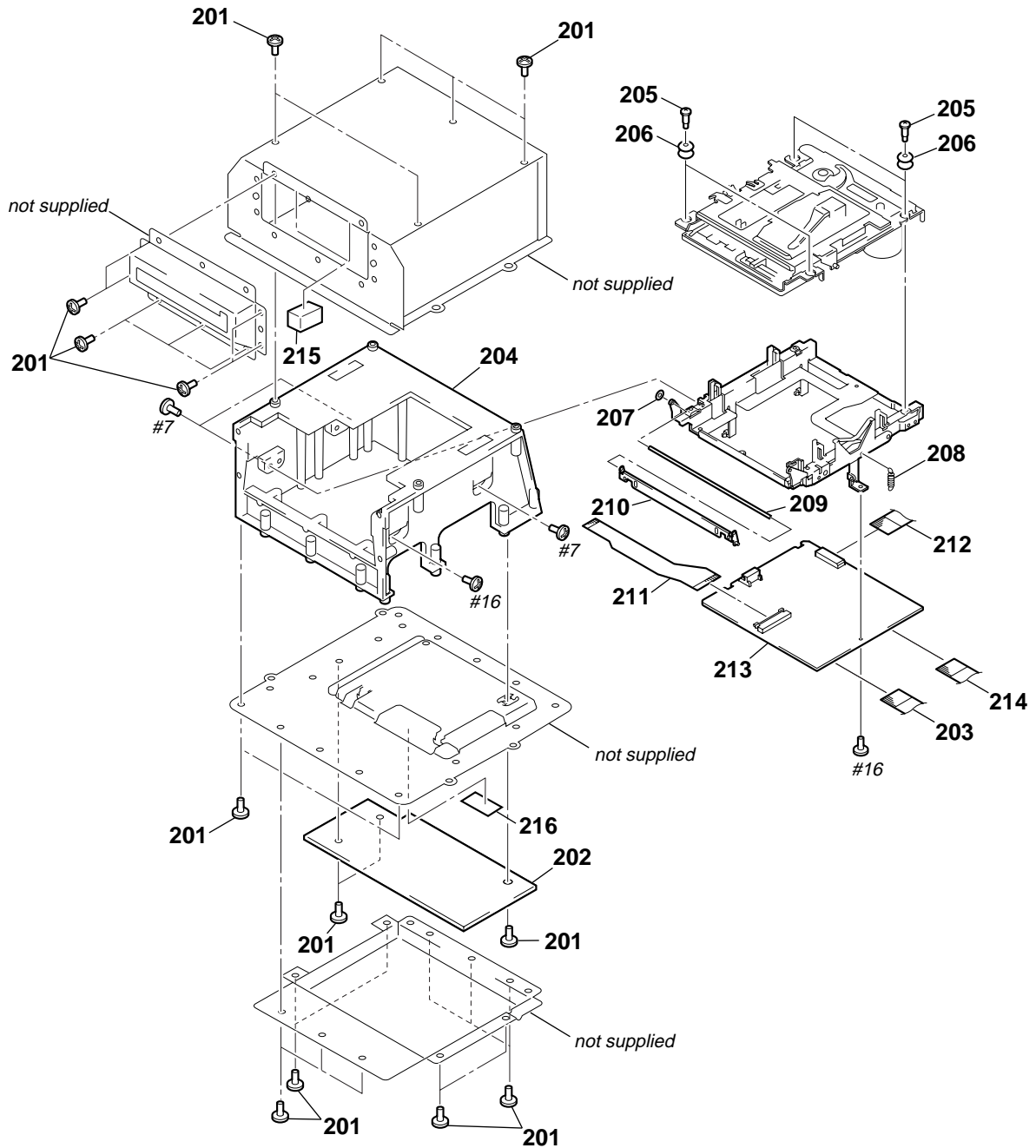
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	1-671-318-21	LINE BOARD		114	1-783-958-11	WIRE, PARALLEL (FFC) (11 CORE)	
102	4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING		115	1-783-957-11	WIRE, PARALLEL (FFC) (8 CORE)	
* 103	3-378-400-01	CUSHION, SARANET		116	1-783-956-11	WIRE, PARALLEL (FFC) (9 CORE)	
* 104	3-027-672-01	HOLDER, LCD		117	1-783-960-11	WIRE, PARALLEL (FFC) (26 CORE)	
* 105	1-671-477-21	BL BOARD		118	4-933-134-41	SCREW (+PTPWH 2.6X5)	
* 106	1-671-317-21	LCD BOARD		* 119	3-028-798-01	BRACKET (HP)	
* 107	A-3323-158-A	AUDIO BOARD, COMPLETE		120	3-033-780-01	SPACER (GEAR A)	
* 108	3-032-904-01	COVER (HEAT SINK)		* 122	1-562-327-00	SOCKET, CONNECTOR 3P	
* 109	3-027-671-01	CHASSIS (MAIN)		* 123	3-031-123-01	COVER, LCD	
* 110	A-3323-157-A	MAIN BOARD, COMPLETE		124	4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING	
111	3-030-485-01	PLATE (RESET)		* 125	3-030-437-01	ILLUMINATOR	
112	3-028-779-01	PLATE, BOTTOM		LCD1	1-803-283-11	LCD UNIT	
* 113	3-028-797-01	BRACKET (LINE)					

7-4. UPPER CABINET SECTION



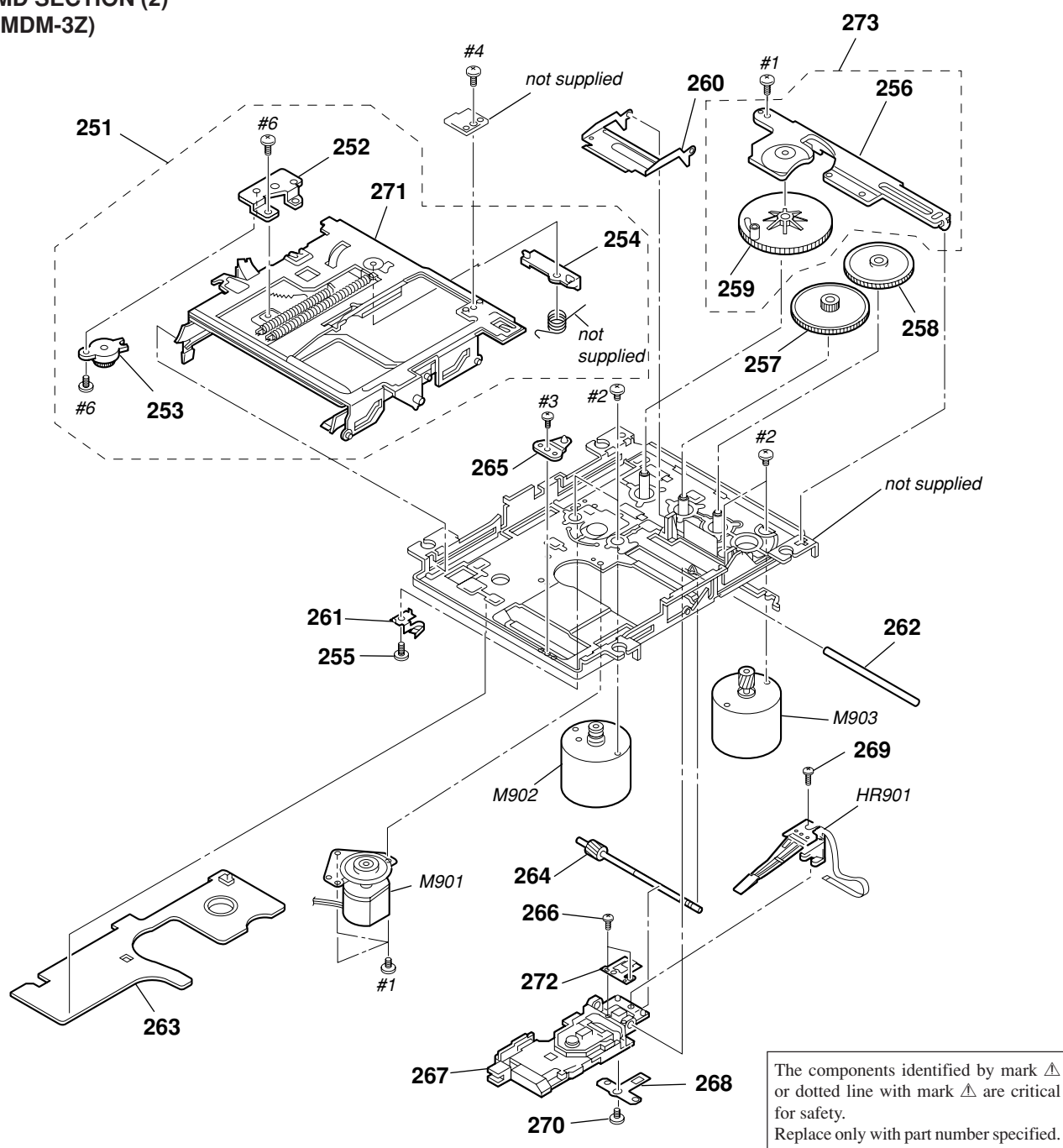
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	1-783-955-11	WIRE, PARALLEL (FFC) (16 CORE)		167	3-028-820-01	LEVER (O/C)	
* 152	1-639-678-12	CD MOTOR BOARD		168	3-027-667-01	GEAR (C)	
153	3-921-725-01	SCREW (2.6X10), +PWH		169	3-027-668-01	GEAR (D)	
154	3-931-379-01	RUBBER, VIBRATION PROOF (RED)		170	3-017-031-21	GEAR (A)	
155	3-910-095-31	RUBBER, VIBRATION PROOF (GREEN)		171	3-017-032-01	GEAR (B)	
156	3-910-116-01	COVER, CD		172	3-033-230-01	BELT	
* 157	A-3321-849-A	CONTROL SW BOARD		173	3-027-655-01	PLATE (CD), LIGHT GUIDE	
158	3-029-900-01	PLATE (KSM-213-CDM), CHUCKING		174	2-627-174-01	PULLEY (M)	
159	1-452-732-11	MAGNET		* 175	3-027-666-01	CHASSIS, MOTOR	
160	3-029-901-01	SCREW (3X8)		* 176	A-3323-155-A	MOTOR BOARD, COMPLETE	
161	3-028-968-01	SPRING, COMPRESSION		177	3-029-908-01	CUSHION (CD)	
162	3-027-663-01	HOLDER, CHUCKING		* 178	3-032-893-01	COVER (4) (CD)	
163	3-027-661-01	LID, CD		179	3-033-781-01	WASHER (GEAR D)	
164	3-027-662-01	PLATE, CD ORNAMENTAL		* 180	3-378-400-01	CUSHION, SARANET	
165	3-027-648-01	CABINET (UPPER)		181	3-028-795-01	BUTTON (TOP)	
166	3-032-880-01	COVER (3) (CD)		M703	1-763-224-11	MOTOR, DC (DOOR OPEN/CLOSE)	

7-5. MD SECTION (1) (MDM-3Z)



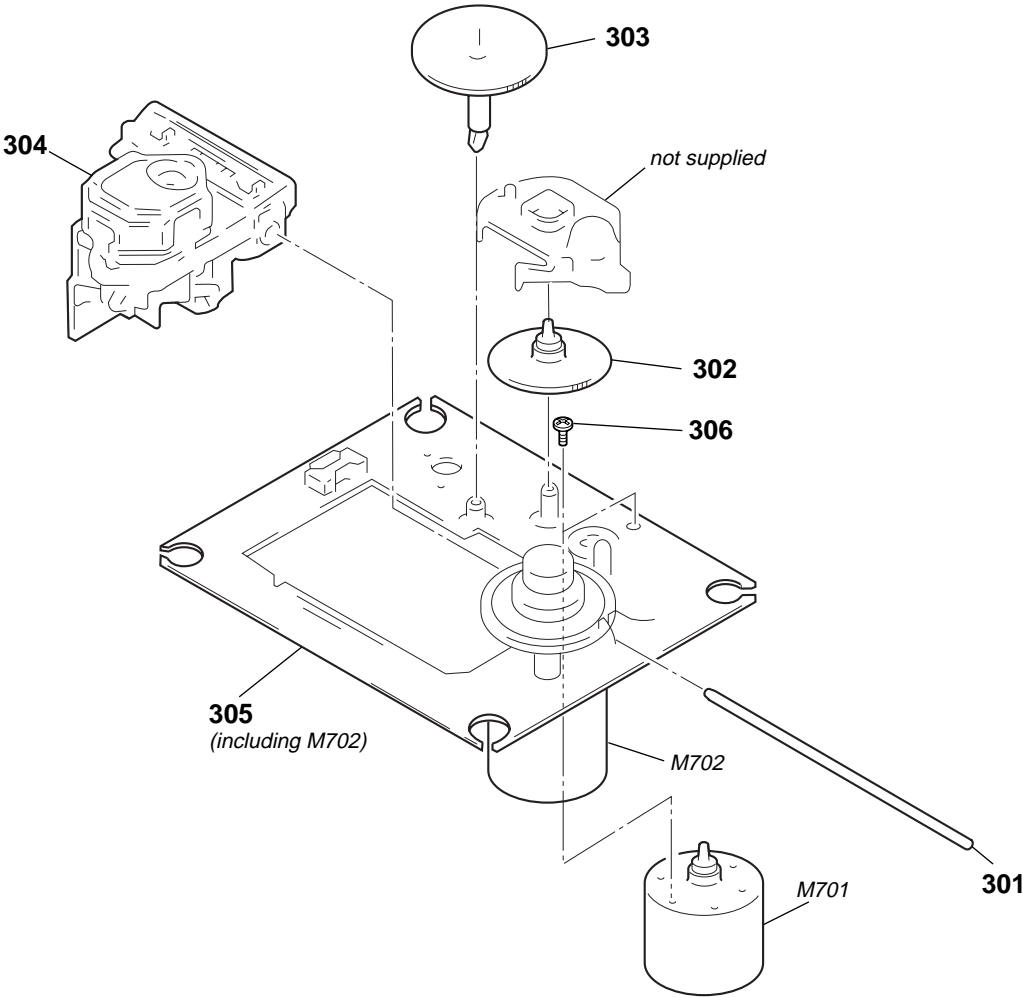
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING		210	X-3377-791-1	SHUTTER ASSY	
* 202	A-3323-164-A	DG BOARD, COMPLETE		211	1-660-966-11	OP RALAY FLEXIBLE BOARD	
203	1-783-961-11	WIRE, PARALLEL (FFC) (19 CORE)		212	1-777-517-11	WIRE, PARALLEL (15 CORE)	
* 204	3-027-682-01	CHASSIS (MD)		* 213	A-3293-900-A	BD BOARD, COMPLETE	
205	4-628-167-01	SCREW, STEP		214	1-783-962-11	WIRE, PARALLEL (FFC) (29 CORE)	
206	4-987-327-01	INSULATOR		215	3-032-950-01	CUSHION (MD), RUBBER	
207	4-986-959-01	WASHER		216	3-378-435-01	CUSHION, SARANET	
208	4-987-910-01	SPRING (O/C), TENSION					
209	4-987-736-01	SHAFT, SHUTTER					

7-6. MD SECTION (2) (MDM-3Z)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	A-4672-138-E	SLIDER COMPLETE ASSY		266	3-366-890-11	SCREW (M1.4)	
* 252	4-983-439-01	BRACKET (DAMPER)		Δ 267	8-583-028-02	OPTICAL PICK-UP KMS-260A	
253	3-953-235-01	DAMPER, OIL		268	4-987-061-01	SPACER (RACK)	
254	4-979-901-21	LEVER (LIMITER)		269	4-988-560-01	SCREW (+P1.7X6)	
255	3-342-375-11	SCREW (M1.7X1.4), SPECIAL		270	4-955-841-11	SCREW	
* 256	4-979-890-11	RETAINER (GEAR)		* 271	4-983-437-01	SLIDER (CAM)	
257	4-979-898-01	GEAR (LB)		272	4-963-914-02	RACK (INSERTER)	
258	4-979-899-01	GEAR (LC)		273	X-4949-113-1	GEAR (LA) ASSY	
259	4-979-897-01	GEAR (LA)		HR901	1-500-396-11	HEAD, OVER WRITE	
260	4-979-885-01	LEVER (HEAD UP)		M901	A-4672-135-A	MOTOR ASSY, SPINDLE (SPINDLE)	
261	4-979-906-11	SPRING (LEAD SCREW)		M902	A-4672-133-A	MOTOR ASSY, SLED (SLED)	
* 262	4-984-556-01	SHAFT (MAIN SHAFT)				(INCLUDING GEAR)	
* 263	1-661-774-11	SW BOARD		M903	A-4672-134-A	MOTOR ASSY, LOADING (LOADING)	
264	A-3304-200-A	SCREW ASSY, LEAD				(INCLUDING GEAR)	
* 265	4-983-511-02	PIN (OUTSERT)					

7-7. CD OPTICAL PICK-UP SECTION
(KSM-213CDM)



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	2-626-908-01	SHAFT, SLED		305	X-2626-202-1	MOTOR SHASSIS ASSY(MB) (INCLUDING M702)(SPINDLE)	
302	2-627-003-02	GEAR (B) (RP)		306	3-713-786-51	SCREW +P 2X3	
303	2-626-907-01	GEAR (A)		M701	X-2625-769-1	MOTOR GEAR ASSY (MB) (INCLUDING GEAR) (SLED)	
\triangle 304	8-848-483-05	OPTICAL PICK-UP KSS-213C					

SECTION 8 ELECTRICAL PARTS LIST

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE :Metal oxide-film resistor
F : nonflammable
- Items marked “ * ”are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- SEMICONDUCTORS
In each case, u : μ , for example :
uA..... : μ A..... , uPA..... : μ PA.....
uPB..... : μ PB..... , uPC..... : μ PC.....
uPD..... : μ PD.....
- CAPACITORS
uF : μ F
- COILS
uH : μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-675-236-21	ANTENNA SW BOARD *****		C223	1-130-495-00	MYLAR 0.1uF 5%	50V
		< SWITCH >		C224	1-136-165-00	FILM 0.1uF 5%	50V
S1	1-771-672-11	SWITCH, SLIDE (FM ANTENNA SELECTOR) *****		C225	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
*	A-3323-158-A	AUDIO BOARD, COMPLETE *****		C226	1-136-165-00	FILM 0.1uF 5%	50V
*	1-562-327-00	SOCKET, CONNECTOR 3P		C227	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S		C228	1-126-959-11	ELECT 0.47uF 20%	50V
		< CAPACITOR >		C229	1-126-934-11	ELECT 220uF 20%	10V
C112	1-126-960-11	ELECT 1uF 20%	50V	C230	1-163-259-91	CERAMIC CHIP 220PF 5%	50V
C113	1-136-165-00	FILM 0.1uF 5%	50V	C301	1-164-492-11	CERAMIC CHIP 0.15uF 10%	16V
C114	1-136-157-00	FILM 0.022uF 5%	50V	C302	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C115	1-130-480-00	MYLAR 0.0056uF 5%	50V	C303	1-124-994-11	ELECT 100uF 20%	10V
C116	1-136-165-00	FILM 0.1uF 5%	50V	C304	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C117	1-136-165-00	FILM 0.1uF 5%	50V	C305	1-124-995-11	ELECT 220uF 20%	10V
C118	1-126-964-11	ELECT 10uF 20%	50V	C306	1-128-551-11	ELECT 22uF 20%	25V
C119	1-126-963-11	ELECT 4.7uF 20%	50V	C309	1-126-959-11	ELECT 0.47uF 20%	50V
C120	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	C310	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C121	1-104-665-11	ELECT 100uF 20%	10V	C311	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C122	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	C312	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C123	1-126-960-11	ELECT 1uF 20%	50V	C313	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C124	1-136-165-00	FILM 0.1uF 5%	50V	C314	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C125	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	C315	1-126-964-11	ELECT 10uF 20%	50V
C126	1-136-165-00	FILM 0.1uF 5%	50V	C316	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C127	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	C317	1-124-994-11	ELECT 100uF 20%	10V
C128	1-126-963-11	ELECT 4.7uF 20%	50V	C318	1-109-982-11	CERAMIC CHIP 1uF 10%	10V
C129	1-126-934-11	ELECT 220uF 20%	10V	C319	1-126-934-11	ELECT 220uF 20%	10V
C130	1-163-259-91	CERAMIC CHIP 220PF 5%	50V	C320	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C122	1-126-960-11	ELECT 1uF 20%	50V	C321	1-126-934-11	ELECT 220uF 20%	10V
C213	1-136-165-00	FILM 0.1uF 5%	50V	C322	1-126-925-11	ELECT 470uF 20%	10V
C214	1-136-157-00	FILM 0.022uF 5%	50V	C323	1-124-994-11	ELECT 100uF 20%	10V
C215	1-130-480-00	MYLAR 0.0056uF 5%	50V	C324	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C216	1-136-165-00	FILM 0.1uF 5%	50V	C325	1-126-934-11	ELECT 220uF 20%	10V
C217	1-136-165-00	FILM 0.1uF 5%	50V	C326	1-126-960-11	ELECT 1uF 20%	50V
C218	1-126-964-11	ELECT 10uF 20%	50V	C327	1-126-964-11	ELECT 10uF 20%	50V
C219	1-126-961-11	ELECT 2.2uF 20%	50V	C328	1-126-964-11	ELECT 10uF 20%	50V
C220	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	C329	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C221	1-104-665-11	ELECT 100uF 20%	10V	C330	1-126-937-11	ELECT 4700uF 20%	16V
C222	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	C331	1-117-207-11	ELECT(BLOCK) 6800uF 20%	25V
				C332	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
				C333	1-126-966-11	ELECT 33uF 20%	16V
				C334	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
				C335	1-126-964-11	ELECT 10uF 20%	50V
				C336	1-126-964-11	ELECT 10uF 20%	50V
				C337	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C338	1-104-665-11	ELECT	100uF	20%	10V			< RESISTOR >					
C339	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V		R101	1-216-013-00	METAL CHIP	33	5%	1/10W	
C341	1-107-682-11	CERAMIC CHIP	1uF	10%	16V		R111	1-216-295-00	METAL CHIP	0	5%	1/10W	
C342	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V		R112	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
C343	1-126-960-11	ELECT	1uF	20%	50V		R117	1-216-093-91	RES,CHIP	68K	5%	1/10W	
C345	1-126-963-11	ELECT	4.7uF	20%	50V		R118	1-216-073-00	METAL CHIP	10K	5%	1/10W	
C346	1-104-665-11	ELECT	100uF	20%	10V		R119	1-216-073-00	METAL CHIP	10K	5%	1/10W	
C347	1-104-665-11	ELECT	100uF	20%	10V		R120	1-216-073-00	METAL CHIP	10K	5%	1/10W	
C348	1-163-259-91	CERAMIC CHIP	220PF	5%	50V		R121	1-216-296-00	METAL CHIP	0	5%	1/8W	
< CONNECTOR >							R122	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
< DIODE >							R123	1-216-049-91	RES,CHIP	1K	5%	1/10W	
* CN301	1-564-509-11	PLUG, CONNECTOR 6P					R124	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
* CN302	1-564-510-11	PLUG, CONNECTOR 7P					R125	1-216-049-91	RES,CHIP	1K	5%	1/10W	
< DIODE >							R126	1-216-029-00	METAL CHIP	150	5%	1/10W	
D301	8-719-988-61	DIODE	1SS355TE-17				R127	1-216-214-00	RES,CHIP	4.7K	5%	1/8W	
D302	8-719-056-83	DIODE	UDZ-TE-17-6.8B				R128	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
D303	8-719-976-99	DIODE	DTZ5.1B				R129	1-216-049-91	RES,CHIP	1K	5%	1/10W	
D304	8-719-988-61	DIODE	1SS355TE-17				R130	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
D306	8-719-056-85	DIODE	UDZ-TE-17-8.2B				R132	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
D307	8-719-988-61	DIODE	1SS355TE-17				R151	1-216-121-91	RES,CHIP	1M	5%	1/10W	
< IC >							R152	1-216-121-91	RES,CHIP	1M	5%	1/10W	
IC305	8-759-538-94	IC	LA4663				R201	1-216-013-00	METAL CHIP	33	5%	1/10W	
IC307	8-759-636-55	IC	M5218AFP				R211	1-216-063-91	RES,CHIP	3.9K	5%	1/10W	
IC309	8-759-701-02	IC	NJM2073M				R212	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
IC311	8-759-100-96	IC	NJM4558M-TE2				R217	1-216-093-91	RES,CHIP	68K	5%	1/10W	
IC312	8-759-569-64	IC	BH3863F-E2				R218	1-216-073-00	METAL CHIP	10K	5%	1/10W	
< JUMPER RESISTOR >							R219	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
JC557	1-216-295-00	METAL CHIP	0	5%	1/10W		R220	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
JC558	1-216-296-00	METAL CHIP	0	5%	1/8W		R221	1-216-295-00	METAL CHIP	0	5%	1/10W	
JC559	1-216-296-00	METAL CHIP	0	5%	1/8W		R222	1-216-064-00	METAL CHIP	4.3K	5%	1/10W	
JC560	1-216-296-00	METAL CHIP	0	5%	1/8W		R223	1-216-049-91	RES,CHIP	1K	5%	1/10W	
JC561	1-216-295-00	METAL CHIP	0	5%	1/10W		R224	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
JC562	1-216-295-00	METAL CHIP	0	5%	1/10W		R225	1-216-049-91	RES,CHIP	1K	5%	1/10W	
JC564	1-216-295-00	METAL CHIP	0	5%	1/10W		R226	1-216-029-00	METAL CHIP	150	5%	1/10W	
JC565	1-216-295-00	METAL CHIP	0	5%	1/10W		R227	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
JC566	1-216-295-00	METAL CHIP	0	5%	1/10W		R228	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
< TRANSISTOR >							R229	1-216-049-91	RES,CHIP	1K	5%	1/10W	
Q101	8-729-920-31	TRANSISTOR	DTC343TK				R230	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
Q104	8-729-920-31	TRANSISTOR	DTC343TK				R232	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
Q105	8-729-920-31	TRANSISTOR	DTC343TK				R251	1-216-121-91	RES,CHIP	1M	5%	1/10W	
Q201	8-729-920-31	TRANSISTOR	DTC343TK				R252	1-216-121-91	RES,CHIP	1M	5%	1/10W	
Q204	8-729-920-31	TRANSISTOR	DTC343TK				R302	1-216-049-91	RES,CHIP	1K	5%	1/10W	
Q205	8-729-920-31	TRANSISTOR	DTC343TK				R303	1-216-049-91	RES,CHIP	1K	5%	1/10W	
Q301	8-729-920-85	TRANSISTOR	2SD1664-QR				R304	1-216-049-91	RES,CHIP	1K	5%	1/10W	
Q304	8-729-920-41	TRANSISTOR	FMC3				R305	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
Q305	8-729-120-28	TRANSISTOR	2SC1623-L5L6				R306	1-216-075-00	METAL CHIP	12K	5%	1/10W	
Q306	8-729-021-82	TRANSISTOR	2SD2396K				R307	1-216-037-00	METAL CHIP	330	5%	1/10W	
Q307	8-729-922-62	TRANSISTOR	2SD1760F5-TLQ				R309	1-216-037-00	METAL CHIP	330	5%	1/10W	
Q308	8-729-903-46	TRANSISTOR	2SB1132-P				R310	1-216-081-00	METAL CHIP	22K	5%	1/10W	
Q309	8-729-027-46	TRANSISTOR	DTC114YKA-T146				R311	1-216-105-91	RES,CHIP	220K	5%	1/10W	
Q310	8-729-920-41	TRANSISTOR	FMC3				R312	1-216-075-00	METAL CHIP	12K	5%	1/10W	
Q313	8-729-120-28	TRANSISTOR	2SC1623-L5L6				R313	1-216-075-00	METAL CHIP	12K	5%	1/10W	
Q314	8-729-027-46	TRANSISTOR	DTC114YKA-T146				R314	1-216-073-00	METAL CHIP	10K	5%	1/10W	
							R315	1-216-073-00	METAL CHIP	10K	5%	1/10W	
							R316	1-216-073-00	METAL CHIP	10K	5%	1/10W	
							R317	1-216-113-00	METAL CHIP	470K	5%	1/10W	
							R318	1-216-295-00	METAL CHIP	0	5%	1/10W	

AUDIO

BATT

BD

Ref. No.	Part No.	Description			Remark
R319	1-216-049-91	RES,CHIP	1K	5%	1/10W
R320	1-216-121-91	RES,CHIP	1M	5%	1/10W
R321	1-216-041-00	METAL CHIP	470	5%	1/10W
R322	1-216-025-91	RES,CHIP	100	5%	1/10W
R327	1-216-049-91	RES,CHIP	1K	5%	1/10W
R328	1-216-089-91	RES,CHIP	47K	5%	1/10W
R331	1-216-049-91	RES,CHIP	1K	5%	1/10W
R332	1-216-049-91	RES,CHIP	1K	5%	1/10W
R335	1-216-017-91	RES,CHIP	47	5%	1/10W
R336	1-216-017-91	RES,CHIP	47	5%	1/10W
R339	1-216-089-91	RES,CHIP	47K	5%	1/10W
R341	1-216-041-00	METAL CHIP	470	5%	1/10W
R343	1-216-013-00	METAL CHIP	33	5%	1/10W
R344	1-216-049-91	RES,CHIP	1K	5%	1/10W
R345	1-216-049-91	RES,CHIP	1K	5%	1/10W
R346	1-216-049-91	RES,CHIP	1K	5%	1/10W
R348	1-216-041-00	METAL CHIP	470	5%	1/10W

*	1-671-314-21	BATT BOARD	*****		
	3-028-894-01	TERMINAL (+), BATTERY			
	3-028-895-01	TERMINAL (-), BATTERY			
< CAPACITOR >					
C915	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V

*	A-3293-900-A	BD BOARD, COMPLETE	*****		
< CAPACITOR >					
C101	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C104	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C105	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C106	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C107	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C108	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C109	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C110	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C111	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C113	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C115	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C116	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C117	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C121	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C122	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C128	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C129	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C130	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C131	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V

Ref. No.	Part No.	Description	Remark		
C132	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C133	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C134	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C135	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C136	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C143	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C144	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C146	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C151	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C152	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C153	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C156	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C158	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C160	1-104-601-11	ELECT CHIP	10uF	20%	10V
C161	1-104-601-11	ELECT CHIP	10uF	20%	10V
C163	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C164	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C167	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C168	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C169	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C171	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C181	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C182	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C183	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C184	1-107-836-11	ELECT CHIP	22uF	20%	8V
C185	1-164-611-11	CERAMIC CHIP	0.001uF	10%	500V
C187	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C188	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C189	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C190	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C191	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C195	1-164-346-11	CERAMIC CHIP	1uF		16V
C196	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C197	1-163-038-91	CERAMIC CHIP	0.1uF		25V
< CONNECTOR >					
CN101	1-766-508-11	CONNECTOR, FFC/FPC (ZIF) 22P			
CN102	1-778-461-11	CONNECTOR, FFC/FPC 29P			
CN103	1-778-460-11	CONNECTOR, FFC/FPC 19P			
CN104	1-766-898-21	HOUSING, CONNECTOR(PC BOARD)4P			
CN106	1-770-698-11	CONNECTOR, FFC/FPC 15P			
CN110	1-774-731-21	PIN, CONNECTOR (PC BOARD) 5P			
< DIODE >					
D101	8-719-988-61	DIODE 1SS355TE-17			
D181	8-719-046-86	DIODE F1J6TP			
D183	8-719-046-86	DIODE F1J6TP			
< IC >					
IC101	8-752-074-77	IC CXA2523R			
IC103	8-729-903-10	TRANSISTOR FMW1			
IC121	8-752-384-47	IC CXD2652AR			
IC122	8-759-234-20	IC TC7S08F			
IC123	8-759-242-70	IC TC7WU04F			
IC124	8-759-473-29	IC MN41V4400SJ-08-T1			

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
IC152	8-759-430-25	IC BH6511FS				R140	1-216-029-00	METAL CHIP	150	5%	1/10W
IC171	8-759-428-58	IC XL24C01AF-E2				R141	1-216-295-00	METAL CHIP	0	5%	1/10W
IC181	8-759-095-65	IC TC74ACT540FS				R142	1-216-073-00	METAL CHIP	10K	5%	1/10W
IC192	8-759-426-95	IC L88MS33T-TL				R143	1-216-073-00	METAL CHIP	10K	5%	1/10W
< COIL >						R144	1-216-025-91	RES,CHIP	100	5%	1/10W
L101	1-414-235-11	INDUCTOR CHIP				R146	1-216-037-00	METAL CHIP	330	5%	1/10W
L102	1-414-235-11	INDUCTOR CHIP				R147	1-216-025-91	RES,CHIP	100	5%	1/10W
L103	1-414-235-11	INDUCTOR CHIP				R148	1-216-045-00	METAL CHIP	680	5%	1/10W
L105	1-414-235-11	INDUCTOR CHIP				R150	1-216-295-00	METAL CHIP	0	5%	1/10W
L106	1-414-235-11	INDUCTOR CHIP				R158	1-216-097-91	RES,CHIP	100K	5%	1/10W
L121	1-414-235-11	INDUCTOR CHIP				R159	1-216-097-91	RES,CHIP	100K	5%	1/10W
L122	1-414-235-11	INDUCTOR CHIP				R161	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
L151	1-412-622-51	INDUCTOR	10uH			R162	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
L152	1-412-622-51	INDUCTOR	10uH			R163	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
L153	1-412-039-51	INDUCTOR CHIP	100uH			R164	1-216-045-00	METAL CHIP	680	5%	1/10W
L154	1-412-039-51	INDUCTOR CHIP	100uH			R165	1-216-097-91	RES,CHIP	100K	5%	1/10W
L161	1-414-235-11	INDUCTOR CHIP				R166	1-220-149-11	REGISTER	2.2	10%	1/2W
L162	1-414-235-11	INDUCTOR CHIP				R167	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
< TRANSISTOR >						R169	1-219-724-11	METAL CHIP	1	1%	1/4W
Q101	8-729-028-91	TRANSISTOR	DTA144EUA-T106			R170	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q102	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR			R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q103	8-729-028-99	TRANSISTOR	DTC114YUA-T106			R172	1-216-295-00	METAL CHIP	0	5%	1/10W
Q104	8-729-028-99	TRANSISTOR	DTC114YUA-T106			R173	1-216-121-91	RES,CHIP	1M	5%	1/10W
Q162	8-729-101-07	TRANSISTOR	2SB798-DL			R175	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
Q163	8-729-028-91	TRANSISTOR	DTA144EUA-T106			R176	1-216-295-00	METAL CHIP	0	5%	1/10W
Q180	8-729-028-96	TRANSISTOR	DTC114EUA-T106			R177	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
Q181	8-729-018-75	TRANSISTOR	2SJ278MY			R178	1-216-295-00	METAL CHIP	0	5%	1/10W
Q182	8-729-017-65	TRANSISTOR	2SK1764KY			R179	1-216-089-91	RES,CHIP	47K	5%	1/10W
< RESISTOR >						R180	1-216-073-00	METAL CHIP	10K	5%	1/10W
R101	1-216-295-00	METAL CHIP	0	5%	1/10W	R181	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-049-91	RES,CHIP	1K	5%	1/10W	R182	1-216-089-91	RES,CHIP	47K	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W	R183	1-216-089-91	RES,CHIP	47K	5%	1/10W
R105	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R184	1-216-073-00	METAL CHIP	10K	5%	1/10W
R106	1-216-133-00	METAL CHIP	3.3M	5%	1/10W	R185	1-216-073-00	METAL CHIP	10K	5%	1/10W
R107	1-216-113-00	METAL CHIP	470K	5%	1/10W	R186	1-216-296-00	METAL CHIP	0	5%	1/8W
R109	1-216-295-00	METAL CHIP	0	5%	1/10W	R187	1-216-296-00	METAL CHIP	0	5%	1/8W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W	R188	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-295-00	METAL CHIP	0	5%	1/10W	R189	1-216-073-00	METAL CHIP	10K	5%	1/10W
R112	1-216-089-91	RES,CHIP	47K	5%	1/10W	R190	1-216-073-00	METAL CHIP	10K	5%	1/10W
R113	1-216-049-91	RES,CHIP	1K	5%	1/10W	R195	1-216-295-00	METAL CHIP	0	5%	1/10W
R115	1-216-049-91	RES,CHIP	1K	5%	1/10W	R196	1-216-295-00	METAL CHIP	0	5%	1/10W
R117	1-216-113-00	METAL CHIP	470K	5%	1/10W	R198	1-216-295-00	METAL CHIP	0	5%	1/10W
R120	1-216-025-91	RES,CHIP	100	5%	1/10W	R199	1-216-295-00	METAL CHIP	0	5%	1/10W
R121	1-216-097-91	RES,CHIP	100K	5%	1/10W	R200	1-216-295-00	METAL CHIP	0	5%	1/10W
R123	1-216-033-00	METAL CHIP	220	5%	1/10W	R201	1-216-295-00	METAL CHIP	0	5%	1/10W
R124	1-216-025-91	RES,CHIP	100	5%	1/10W	R202	1-216-295-00	METAL CHIP	0	5%	1/10W
R125	1-216-025-91	RES,CHIP	100	5%	1/10W	R502	1-216-295-00	METAL CHIP	0	5%	1/10W
R127	1-216-025-91	RES,CHIP	100	5%	1/10W	R504	1-216-295-00	METAL CHIP	0	5%	1/10W
R131	1-216-073-00	METAL CHIP	10K	5%	1/10W	*****					
R132	1-216-097-91	RES,CHIP	100K	5%	1/10W	< PILOT LAMP >					
R133	1-216-117-00	METAL CHIP	680K	5%	1/10W	PL553	1-517-848-11	LAMP, PILOT (LCD BACK-LIGHT)			
R134	1-216-049-91	RES,CHIP	1K	5%	1/10W	PL554	1-517-848-11	LAMP, PILOT (LCD BACK-LIGHT)			
R135	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	PL555	1-517-848-11	LAMP, PILOT (LCD BACK-LIGHT)			
R136	1-216-049-91	RES,CHIP	1K	5%	1/10W	*****					
R137	1-216-025-91	RES,CHIP	100	5%	1/10W						

CD MOROR

CONTROL (F)

CONTROL (L)

CONTROL (R)

JOG

Ref. No.	Part No.	Description	Remark
*	1-639-678-12	CD MOTOR BOARD *****	
		< CONNECTOR >	
CNP707	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P	
		< SWITCH >	
S701	1-572-085-11	SWITCH, LEAF (LIMIT)	

*	A-3323-161-A	CONTROL (F) BOARD, COMPLETE *****	
		< CAPACITOR >	
C555	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C556	1-163-038-91	CERAMIC CHIP 0.1uF	25V
		< CONNECTOR >	
CN551	1-563-614-31	HOUSING, CONNECTOR 11P	
		< DIODE >	
D553	8-719-047-57	LED SLA-362MT3F-A47 (AMS/PRESET)	
D554	8-719-047-57	LED SLA-362MT3F-A47 (SELECT)	
		< TRANSISTOR >	
Q553	8-729-027-58	TRANSISTOR DTC143ZKA-T146	
Q554	8-729-027-58	TRANSISTOR DTC143ZKA-T146	
		< RESISTOR >	
R551	1-216-033-00	METAL CHIP 220	5% 1/10W
R552	1-216-079-00	METAL CHIP 18K	5% 1/10W
R558	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R559	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R560	1-216-056-00	RES,CHIP 2K	5% 1/10W
R561	1-216-051-00	METAL CHIP 1.2K	5% 1/10W
R562	1-216-048-00	METAL CHIP 910	5% 1/10W
R563	1-216-045-00	METAL CHIP 680	5% 1/10W
		< SWITCH >	
S557	1-692-014-11	SWITCH, KEY BOARD (DELETE CLOCK)	
S558	1-692-014-11	SWITCH, KEY BOARD (TUNE ⇐ - ◀◀)	
S559	1-692-014-11	SWITCH, KEY BOARD (NO CANCEL)	
S560	1-692-014-11	SWITCH, KEY BOARD (EDIT)	
S561	1-692-014-11	SWITCH, KEY BOARD (YES ENTER)	
S562	1-692-014-11	SWITCH, KEY BOARD (DISPLAY)	
S563	1-692-014-11	SWITCH, KEY BOARD (TUNE + ⇒ ▶▶)	
S564	1-692-014-11	SWITCH, KEY BOARD (INSERT TIMER)	
		CONTROL (L) BOARD *****	
		< CAPACITOR >	
C557	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
C558	1-124-259-11	ELECT 4.7uF	20% 16V
		< FERRITE BEAD >	
FB303	1-500-445-21	FERRITE	

Ref. No.	Part No.	Description	Remark
		< IC >	
IC550	8-742-129-00	HYB SBX1971-51P	
		< RESISTOR >	
R570	1-216-045-00	METAL CHIP 680	5% 1/10W
R571	1-216-048-00	METAL CHIP 910	5% 1/10W
R572	1-216-051-00	METAL CHIP 1.2K	5% 1/10W
R573	1-216-056-00	RES,CHIP 2K	5% 1/10W
R574	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R575	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R579	1-216-085-00	METAL CHIP 33K	5% 1/10W
		< SWITCH >	
S572	1-692-014-11	SWITCH, KEY BOARD (OPERATE)	
S573	1-692-014-11	SWITCH, KEY BOARD (SLEEP)	
S574	1-692-014-11	SWITCH, KEY BOARD (STANDBY)	
S575	1-692-014-11	SWITCH, KEY BOARD (SYNCHRO REC CD ▶ MD)	
S576	1-692-014-11	SWITCH, KEY BOARD (REC IT TO END)	
S577	1-692-014-11	SWITCH, KEY BOARD (REC IT TO TOP)	
S578	1-692-014-11	SWITCH, KEY BOARD (REC)	
		CONTROL (R) BOARD *****	
		< RESISTOR >	
R564	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R565	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R566	1-216-056-00	RES,CHIP 2K	5% 1/10W
R567	1-216-051-00	METAL CHIP 1.2K	5% 1/10W
R568	1-216-048-00	METAL CHIP 910	5% 1/10W
R569	1-216-045-00	METAL CHIP 680	5% 1/10W
		< SWITCH >	
S565	1-692-014-11	SWITCH, KEY BOARD (VOLUME +)	
S566	1-692-014-11	SWITCH, KEY BOARD (VOLUME -)	
S567	1-692-014-11	SWITCH, KEY BOARD (BASS/TREBLE)	
S568	1-692-014-11	SWITCH, KEY BOARD (MEGA BASS)	
S569	1-692-014-11	SWITCH, KEY BOARD (▲ MD EJECT)	
S570	1-692-014-11	SWITCH, KEY BOARD (MONO/ST REPEAT)	
S571	1-692-014-11	SWITCH, KEY BOARD (AUTO PRESET/RDS SHUF/PGM)	
		JOG BOARD *****	
		< CAPACITOR >	
C553	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C554	1-163-038-91	CERAMIC CHIP 0.1uF	25V
		< SWITCH >	
S556	1-475-977-11	SWITCH, ROTARY (JOG DIAL, - I◀◀, ▶▶I +)	

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
*	A-3321-849-A	CONTROL SW BOARD *****					C611	1-164-156-11	CERAMIC CHIP	0.1uF			25V
							C612	1-164-156-11	CERAMIC CHIP	0.1uF			25V
							C613	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
							C614	1-163-251-11	CERAMIC CHIP	100PF	5%		50V
							C615	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C550	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V		C616	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C551	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V		C617	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C552	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V		C618	1-109-994-11	CERAMIC CHIP	2.2uF	10%		10V
							C619	1-126-207-11	ELECT CHIP	33uF	20%		4V
							C620	1-107-823-11	CERAMIC CHIP	0.47uF	10%		16V
CN550	1-691-067-31	HOUSING, CONNECTOR 8P					C621	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
							C622	1-164-156-11	CERAMIC CHIP	0.1uF			25V
							C624	1-162-915-11	CERAMIC CHIP	10PF	0.5PF		50V
D550	8-719-047-57	LED SLA-362MT3F-A47 (MD)					C625	1-162-915-11	CERAMIC CHIP	10PF	0.5PF		50V
D551	8-719-047-57	LED SLA-362MT3F-A47 (CD)					C626	1-163-021-91	CERAMIC CHIP	0.01uF	10%		50V
D552	8-719-047-57	LED SLA-362MT3F-A47 (RADIO)											
							C627	1-164-156-11	CERAMIC CHIP	0.1uF			25V
							C628	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
							C629	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
PL550	1-517-848-11	LAMP, PILOT (CD LIGHT)					C632	1-126-603-11	ELECT CHIP	4.7uF	20%		35V
							C633	1-126-603-11	ELECT CHIP	4.7uF	20%		35V
							C634	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
Q550	8-729-027-58	TRANSISTOR DTC143ZKA-T146					C635	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
Q551	8-729-027-58	TRANSISTOR DTC143ZKA-T146					C636	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
Q552	8-729-027-58	TRANSISTOR DTC143ZKA-T146					C637	1-126-603-11	ELECT CHIP	4.7uF	20%		35V
							C638	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
							C639	1-124-779-00	ELECT CHIP	10uF	20%		16V
R550	1-216-029-00	METAL CHIP	150	5%	1/10W		C640	1-126-603-11	ELECT CHIP	4.7uF	20%		35V
R553	1-216-069-00	METAL CHIP	6.8K	5%	1/10W		C641	1-164-004-11	CERAMIC CHIP	0.1uF	10%		25V
R554	1-216-061-00	METAL CHIP	3.3K	5%	1/10W		C642	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
R555	1-216-056-00	RES,CHIP	2K	5%	1/10W		C644	1-164-156-11	CERAMIC CHIP	0.1uF			25V
R556	1-216-051-00	METAL CHIP	1.2K	5%	1/10W								
							C645	1-164-156-11	CERAMIC CHIP	0.1uF			25V
R557	1-216-048-00	METAL CHIP	910	5%	1/10W		C650	1-162-966-11	CERAMIC CHIP	0.0022uF	10%		50V
R578	1-216-194-00	METAL CHIP	680	5%	1/8W		C651	1-162-966-11	CERAMIC CHIP	0.0022uF	10%		50V
							C655	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
							C657	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
S550	1-692-014-11	SWITCH, KEY BOARD (□)					C658	1-162-966-11	CERAMIC CHIP	0.0022uF	10%		50V
S551	1-692-014-11	SWITCH, KEY BOARD (▷ MD)					C659	1-163-021-91	CERAMIC CHIP	0.01uF	10%		50V
S552	1-692-014-11	SWITCH, KEY BOARD (BAND RADIO)					C660	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
S553	1-692-014-11	SWITCH, KEY BOARD (▷ CD)					C661	1-162-966-11	CERAMIC CHIP	0.0022uF	10%		50V
S554	1-692-014-11	SWITCH, KEY BOARD (□)					C662	1-163-038-91	CERAMIC CHIP	0.1uF			25V
S555	1-692-014-11	SWITCH, KEY BOARD (▲ CD OPEN/CLOSE)					C666	1-162-923-11	CERAMIC CHIP	47PF	5%		50V
S579	1-692-014-11	SWITCH, KEY BOARD (LINE/LINE LEVEL)					C668	1-163-038-91	CERAMIC CHIP	0.1uF			25V

*	A-3323-164-A	DG BOARD, COMPLETE *****					C670	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
							C672	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
							C673	1-162-915-11	CERAMIC CHIP	10PF	0.5PF		50V
							C674	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
							C675	1-163-251-11	CERAMIC CHIP	100PF	5%		50V
							C676	1-163-251-11	CERAMIC CHIP	100PF	5%		50V
C601	1-162-959-11	CERAMIC CHIP	330PF	5%	50V		C680	1-162-915-11	CERAMIC CHIP	10PF	0.5PF		50V
C602	1-163-263-11	CERAMIC CHIP	330PF	5%	50V								
C603	1-163-005-11	CERAMIC CHIP	470PF	10%	50V								
C604	1-163-263-11	CERAMIC CHIP	330PF	5%	50V								
C605	1-164-156-11	CERAMIC CHIP	0.1uF		25V								
C606	1-162-927-11	CERAMIC CHIP	100PF	5%	50V								
C607	1-162-927-11	CERAMIC CHIP	100PF	5%	50V								
C608	1-162-916-11	CERAMIC CHIP	12PF	5%	50V								
C609	1-162-916-11	CERAMIC CHIP	12PF	5%	50V								
C610	1-164-156-11	CERAMIC CHIP	0.1uF		25V								

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
D602	8-719-988-61	DIODE 1SS355TE-17					FB658	1-500-445-21	FERRITE				
< FERRITE BEAD >							< FILTER >						
FB601	1-500-445-21	FERRITE					FL601	1-239-901-21	FERRITE				
FB602	1-469-125-21	FERRITE					FL602	1-239-901-21	FERRITE				
FB603	1-469-125-21	FERRITE					FL603	1-239-899-21	FILTER, CHIP EMI				
FB604	1-469-125-21	FERRITE					FL604	1-239-899-21	FILTER, CHIP EMI				
FB605	1-469-125-21	FERRITE					FL605	1-239-899-21	FILTER, CHIP EMI				
FB606	1-469-125-21	FERRITE					FL606	1-239-899-21	FILTER, CHIP EMI				
FB607	1-500-445-21	FERRITE					* FL607	1-125-971-21	FILTER, 3 TERMINAL NOISE				
FB608	1-469-125-21	FERRITE					* FL608	1-125-971-21	FILTER, 3 TERMINAL NOISE				
FB609	1-469-125-21	FERRITE					* FL611	1-125-971-21	FILTER, 3 TERMINAL NOISE				
FB610	1-412-973-11	INDUCTOR	0.33uH				* FL612	1-125-971-21	FILTER, 3 TERMINAL NOISE				
FB611	1-500-445-21	FERRITE					* FL619	1-125-971-21	FILTER, 3 TERMINAL NOISE				
FB612	1-469-185-11	FERRITE					* FL620	1-125-971-21	FILTER, 3 TERMINAL NOISE				
FB613	1-500-445-21	FERRITE					< IC >						
FB614	1-500-445-21	FERRITE					IC601	8-759-494-80	IC RU8X12MF-0021				
FB615	1-500-445-21	FERRITE					IC602	8-759-040-83	IC BA6287F				
FB616	1-500-445-21	FERRITE					IC603	8-759-561-36	IC PCM3003E/T2				
FB617	1-500-445-21	FERRITE					IC604	8-759-243-19	IC TC7SU04F				
FB618	1-500-445-21	FERRITE					IC605	8-759-096-87	IC TC7WU04FU(TE12R)				
FB619	1-500-445-21	FERRITE					< JUMPER RESISTOR >						
FB620	1-500-445-21	FERRITE					JC601	1-216-049-91	RES,CHIP	1K	5%	1/10W	
FB621	1-500-445-21	FERRITE					JC603	1-216-049-91	RES,CHIP	1K	5%	1/10W	
FB622	1-500-445-21	FERRITE					JC604	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB623	1-500-445-21	FERRITE					JC605	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB624	1-500-445-21	FERRITE					JC606	1-216-296-00	METAL CHIP	0	5%	1/8W	
FB625	1-500-445-21	FERRITE					JC607	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB626	1-500-445-21	FERRITE					JC608	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB627	1-216-295-00	METAL CHIP	0	5%	1/10W	JC609	1-216-864-11	METAL CHIP	0	5%	1/16W		
FB628	1-500-445-21	FERRITE					JC610	1-216-864-11	METAL CHIP	0	5%	1/16W	
FB630	1-469-125-21	FERRITE					JC611	1-216-864-11	METAL CHIP	0	5%	1/16W	
FB631	1-500-445-21	FERRITE					JC612	1-216-864-11	METAL CHIP	0	5%	1/16W	
FB632	1-500-445-21	FERRITE					JC613	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB633	1-469-185-11	FERRITE					JC614	1-216-296-00	METAL CHIP	0	5%	1/8W	
FB634	1-469-185-11	FERRITE					JC615	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB636	1-500-445-21	FERRITE					JC616	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB637	1-500-445-21	FERRITE					JC617	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB638	1-500-445-21	FERRITE					JC618	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB639	1-500-445-21	FERRITE					JC619	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB640	1-500-445-21	FERRITE					JC620	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB641	1-500-445-21	FERRITE					JC621	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB642	1-500-445-21	FERRITE					JC622	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB643	1-500-445-21	FERRITE					JC623	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB644	1-500-445-21	FERRITE					JC624	1-216-295-00	METAL CHIP	0	5%	1/10W	
FB645	1-500-445-21	FERRITE					< COIL >						
FB646	1-500-445-21	FERRITE					L601	1-414-521-21	INDUCTOR CHIP	10uH			
FB647	1-500-445-21	FERRITE					L602	1-414-398-11	INDUCTOR	10uH			
FB648	1-500-445-21	FERRITE					L603	1-414-398-11	INDUCTOR	10uH			
FB649	1-500-445-21	FERRITE					L604	1-414-398-11	INDUCTOR	10uH			
FB650	1-469-125-21	FERRITE					L605	1-414-398-11	INDUCTOR	10uH			
FB651	1-469-125-21	FERRITE					L606	1-414-398-11	INDUCTOR	10uH			
FB652	1-216-295-00	METAL CHIP	0	5%	1/10W	L607	1-414-398-11	INDUCTOR	10uH				
FB653	1-216-295-00	METAL CHIP	0	5%	1/10W	L608	1-414-398-11	INDUCTOR	10uH				
FB654	1-500-445-21	FERRITE					L609	1-414-398-11	INDUCTOR	10uH			
FB655	1-469-185-11	FERRITE											
FB656	1-469-185-11	FERRITE											
FB657	1-469-185-11	FERRITE											

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
L610	1-414-398-11	INDUCTOR	10uH			R626	1-216-073-00	METAL CHIP	10K	5%	1/10W
L611	1-416-107-21	INDUCTOR				R627	1-216-841-11	METAL CHIP	47K	5%	1/16W
L612	1-414-398-11	INDUCTOR	10uH			R628	1-216-089-91	RES,CHIP	47K	5%	1/10W
L613	1-414-398-11	INDUCTOR	10uH			R629	1-216-833-91	RES,CHIP	10K	5%	1/16W
L614	1-414-398-11	INDUCTOR	10uH			R630	1-216-833-91	RES,CHIP	10K	5%	1/16W
L615	1-500-445-21	FERRITE				R631	1-216-821-11	METAL CHIP	1K	5%	1/16W
L616	1-500-445-21	FERRITE				R632	1-216-821-11	METAL CHIP	1K	5%	1/16W
L617	1-500-445-21	FERRITE				R633	1-216-833-91	RES,CHIP	10K	5%	1/16W
L618	1-500-445-21	FERRITE				R634	1-216-833-91	RES,CHIP	10K	5%	1/16W
L619	1-414-398-11	INDUCTOR	10uH			R635	1-216-833-91	RES,CHIP	10K	5%	1/16W
L620	1-414-398-11	INDUCTOR	10uH			R636	1-216-851-11	METAL CHIP	330K	5%	1/16W
L621	1-414-521-21	INDUCTOR CHIP	10uH			R637	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
L622	1-414-521-21	INDUCTOR CHIP	10uH			R638	1-216-841-11	METAL CHIP	47K	5%	1/16W
< TRANSISTOR >						R639	1-216-847-11	METAL CHIP	150K	5%	1/16W
Q601	8-729-031-43	TRANSISTOR	IMD9A-T108			R640	1-216-821-11	METAL CHIP	1K	5%	1/16W
Q602	8-729-031-43	TRANSISTOR	IMD9A-T108			R641	1-216-843-11	METAL CHIP	68K	5%	1/16W
Q603	8-729-402-84	TRANSISTOR	XN4601			R642	1-216-833-91	RES,CHIP	10K	5%	1/16W
Q604	8-729-402-84	TRANSISTOR	XN4601			R643	1-216-807-11	METAL CHIP	68	5%	1/16W
Q605	8-729-031-43	TRANSISTOR	IMD9A-T108			R644	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q606	8-729-031-43	TRANSISTOR	IMD9A-T108			R646	1-216-041-00	METAL CHIP	470	5%	1/10W
Q607	8-729-031-43	TRANSISTOR	IMD9A-T108			R647	1-216-089-91	RES,CHIP	47K	5%	1/10W
Q608	8-729-027-56	TRANSISTOR	DTC143TKA-T146			R648	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q609	8-729-031-43	TRANSISTOR	IMD9A-T108			R649	1-216-835-11	METAL CHIP	15K	5%	1/16W
Q610	8-729-027-46	TRANSISTOR	DTC114YKA-T146			R650	1-216-833-91	RES,CHIP	10K	5%	1/16W
Q611	8-729-031-43	TRANSISTOR	IMD9A-T108			R651	1-216-077-00	METAL CHIP	15K	5%	1/10W
Q612	8-729-101-07	TRANSISTOR	2SB798-DL			R652	1-216-819-11	METAL CHIP	680	5%	1/16W
Q615	8-729-027-46	TRANSISTOR	DTC114YKA-T146			R653	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q616	8-729-027-46	TRANSISTOR	DTC114YKA-T146			R654	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q617	8-729-019-72	TRANSISTOR	2SB1260			R655	1-216-073-00	METAL CHIP	10K	5%	1/10W
< RESISTOR >						R656	1-216-073-00	METAL CHIP	10K	5%	1/10W
R601	1-216-821-11	METAL CHIP	1K	5%	1/16W	R657	1-216-841-11	METAL CHIP	47K	5%	1/16W
R602	1-216-821-11	METAL CHIP	1K	5%	1/16W	R658	1-216-853-11	METAL CHIP	470K	5%	1/16W
R603	1-216-821-11	METAL CHIP	1K	5%	1/16W	R659	1-216-817-11	METAL CHIP	470	5%	1/16W
R604	1-216-821-11	METAL CHIP	1K	5%	1/16W	R660	1-216-089-91	RES,CHIP	47K	5%	1/10W
R605	1-216-222-00	RES,CHIP	10K	5%	1/8W	R661	1-216-857-11	METAL CHIP	1M	5%	1/16W
R606	1-216-833-91	RES,CHIP	10K	5%	1/16W	R662	1-216-819-11	METAL CHIP	680	5%	1/16W
R607	1-216-222-00	RES,CHIP	10K	5%	1/8W	R663	1-216-821-11	METAL CHIP	1K	5%	1/16W
R608	1-216-073-00	METAL CHIP	10K	5%	1/10W	R664	1-216-821-11	METAL CHIP	1K	5%	1/16W
R609	1-216-246-00	RES,CHIP	100K	5%	1/8W	R665	1-216-073-00	METAL CHIP	10K	5%	1/10W
R610	1-216-246-00	RES,CHIP	100K	5%	1/8W	R666	1-216-821-11	METAL CHIP	1K	5%	1/16W
R611	1-216-845-11	METAL CHIP	100K	5%	1/16W	R667	1-216-821-11	METAL CHIP	1K	5%	1/16W
R612	1-216-097-91	RES,CHIP	100K	5%	1/10W	R668	1-216-033-00	METAL CHIP	220	5%	1/10W
R613	1-216-833-91	RES,CHIP	10K	5%	1/16W	R669	1-216-857-11	METAL CHIP	1M	5%	1/16W
R614	1-216-857-11	METAL CHIP	1M	5%	1/16W	R671	1-216-049-91	RES,CHIP	1K	5%	1/10W
R615	1-216-833-91	RES,CHIP	10K	5%	1/16W	R672	1-216-049-91	RES,CHIP	1K	5%	1/10W
R616	1-216-845-11	METAL CHIP	100K	5%	1/16W	< VIBRATOR >					
R617	1-216-809-11	METAL CHIP	100	5%	1/16W	X601	1-760-174-11	VIBRATOR, CERAMIC (12MHz)			
R618	1-216-809-11	METAL CHIP	100	5%	1/16W	X602	1-781-183-11	VIBRATOR, CRYSTAL (32.768kHz)			
R619	1-216-845-11	METAL CHIP	100K	5%	1/16W	X603	1-767-151-11	VIBRATOR, CRYSTAL (22.5792MHz)			
R620	1-216-851-11	METAL CHIP	330K	5%	1/16W	*****					
R621	1-216-833-91	RES,CHIP	10K	5%	1/16W	*	1-671-317-21	LCD BOARD			
R622	1-216-833-91	RES,CHIP	10K	5%	1/16W	*****					
R623	1-216-833-91	RES,CHIP	10K	5%	1/16W	*	3-027-672-01	HOLDER, LCD			
R624	1-216-073-00	METAL CHIP	10K	5%	1/10W		3-030-437-01	ILLUMINATOR			
R625	1-216-833-91	RES,CHIP	10K	5%	1/16W	*	3-031-123-01	COVER, LCD			
							4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING			

LCD	LINE	MAIN
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Ref. No.	Part No.	Description	Remark		
< CAPACITOR >					
C559	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C560	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C561	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C562	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C563	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C564	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C565	1-109-982-11	CERAMIC	1MF	10%	10V
C566	1-109-982-11	CERAMIC	1MF	10%	10V
C567	1-109-982-11	CERAMIC	1MF	10%	10V
C568	1-109-982-11	CERAMIC	1MF	10%	10V
C569	1-109-982-11	CERAMIC	1MF	10%	10V
C570	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C571	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C572	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C573	1-104-665-11	ELECT	100uF	20%	10V
< CONNECTOR >					
CN552	1-691-068-21	HOUSING, CONNECTOR 9P			
CN553	1-563-624-11	HOUSING, CONNECTOR 21P			
< JUMPER RESISTOR >					
JC556	1-216-295-00	METAL CHIP	0	5%	1/10W
< LIQUID CRYSTAL DISPLAY >					
LCD1	1-803-283-11	LCD UNIT			
< RESISTOR >					
R576	1-216-114-00	RES,CHIP	510K	5%	1/10W
R577	1-216-111-00	METAL CHIP	390K	5%	1/10W
R580	1-216-073-00	METAL CHIP	10K	5%	1/10W
R581	1-216-049-91	RES,CHIP	1K	5%	1/10W
R582	1-216-049-91	RES,CHIP	1K	5%	1/10W
R583	1-216-049-91	RES,CHIP	1K	5%	1/10W
R584	1-216-049-91	RES,CHIP	1K	5%	1/10W
< VARIABLE RESISTOR >					
RV550	1-238-552-11	RES, ADJ, CARBON 470K (DIMMER)			

*	1-671-318-21	LINE BOARD			

< CONNECTOR >					
CN314	1-785-712-11	CONNECTOR, BOARD TO BOARD 4P			
< DIODE >					
D308	8-719-988-61	DIODE 1SS355TE-17			
D309	8-719-988-61	DIODE 1SS355TE-17			
< FERRITE BEAD >					
FB102	1-500-241-21	FERRITE			
FB202	1-500-241-21	FERRITE			
FB302	1-500-241-21	FERRITE			
< JACK >					
J302	1-785-369-11	JACK (LINE IN)			

Ref. No.	Part No.	Description	Remark		
*	A-3323-157-A	MAIN BOARD, COMPLETE *****			
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S	
		< CAPACITOR >			
C101	1-126-961-11	ELECT	2.2uF	20%	50V
C102	1-126-961-11	ELECT	2.2uF	20%	50V
C103	1-126-961-11	ELECT	2.2uF	20%	50V
C104	1-126-964-11	ELECT	10uF	20%	50V
C105	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C106	1-162-979-11	CERAMIC CHIP	0.0027uF	10%	50V
C107	1-124-233-11	ELECT	10uF	20%	16V
C108	1-126-964-11	ELECT	10uF	20%	50V
C109	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C111	1-104-665-11	ELECT	100uF	20%	10V
C112	1-126-964-11	ELECT	10uF	20%	50V
C113	1-126-964-11	ELECT	10uF	20%	50V
C114	1-124-257-00	ELECT	2.2uF	20%	50V
C127	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C201	1-126-961-11	ELECT	2.2uF	20%	50V
C202	1-126-961-11	ELECT	2.2uF	20%	50V
C203	1-126-961-11	ELECT	2.2uF	20%	50V
C204	1-126-964-11	ELECT	10uF	20%	50V
C205	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C206	1-162-979-11	CERAMIC CHIP	0.0027uF	10%	50V
C207	1-126-964-11	ELECT	10uF	20%	50V
C208	1-126-964-11	ELECT	10uF	20%	50V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C211	1-104-665-11	ELECT	100uF	20%	10V
C212	1-126-964-11	ELECT	10uF	20%	50V
C213	1-126-964-11	ELECT	10uF	20%	50V
C214	1-126-961-11	ELECT	2.2uF	20%	50V
C227	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C301	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C302	1-124-584-00	ELECT	100uF	20%	10V
C303	1-104-665-11	ELECT	100uF	20%	10V
C321	1-104-665-11	ELECT	100uF	20%	10V
C327	1-104-665-11	ELECT	100uF	20%	10V
C328	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C329	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C331	1-104-665-11	ELECT	100uF	20%	10V
C340	1-124-233-11	ELECT	10uF	20%	16V
C341	1-124-233-11	ELECT	10uF	20%	16V
C342	1-124-233-11	ELECT	10uF	20%	16V
C401	1-117-850-11	ELECT	15000uF	20%	16V
C402	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C403	1-126-964-11	ELECT	10uF	20%	50V
C404	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C405	1-104-905-11	CAPACITOR	0.22F		5.5V
C406	1-163-059-91	CERAMIC CHIP	0.01uF	10%	50V
C407	1-126-157-11	ELECT	10uF	20%	16V
C408	1-126-157-11	ELECT	10uF	20%	16V
C409	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C410	1-126-935-11	ELECT	470uF	20%	16V
C411	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C412	1-126-925-11	ELECT	470uF	20%	10V	C471	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C472	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C414	1-124-589-11	ELECT	47uF	20%	16V	C473	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C415	1-126-964-11	ELECT	10uF	20%	50V	C475	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C416	1-126-964-11	ELECT	10uF	20%	50V	C476	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C417	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	C477	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C418	1-124-589-11	ELECT	47uF	20%	16V	C478	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C419	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	C479	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C420	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C480	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C421	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C483	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C422	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	C484	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C423	1-164-378-11	CERAMIC CHIP	30PF	5%	50V	C485	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C424	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C486	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C425	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	C487	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C426	1-162-921-11	CERAMIC CHIP	33PF	5%	50V	C488	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C427	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C489	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C428	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C490	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C429	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	C491	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C430	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C492	1-126-961-11	ELECT	2.2uF	20%	50V
C431	1-124-584-00	ELECT	100uF	20%	10V	C493	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C432	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	C494	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C433	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C495	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C434	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C496	1-128-551-11	ELECT	22uF	20%	25V
C435	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C497	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C436	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C498	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C437	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C499	1-126-935-11	ELECT	470uF	20%	6.3V
C438	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C500	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C439	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C501	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C440	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C441	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C442	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C443	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C505	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C444	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C506	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C445	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C507	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C446	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C508	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C447	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C510	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C448	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C511	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C449	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C512	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C450	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C513	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C451	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C514	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C452	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C515	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C453	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C516	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C455	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C517	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C456	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C518	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C457	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C519	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C458	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C520	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C459	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C521	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C460	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C522	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C461	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C524	1-126-934-11	ELECT	220uF	20%	10V
C462	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C701	1-124-584-00	ELECT	100uF	20%	10V
C463	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C702	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C464	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C703	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C465	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C704	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C466	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C705	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C467	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C706	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C468	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C707	1-126-925-11	ELECT	470uF	20%	10V
C469	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C708	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C470	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C709	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C710	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V	C776	1-127-688-21	TANTAL. CHIP	10uF	20%	6.3V
C711	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V	C777	1-126-382-11	ELECT	100uF	20%	10V
C712	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	C778	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C713	1-124-584-00	ELECT	100uF	20%	10V	C779	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C714	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C780	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C715	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V	C781	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C716	1-126-157-11	ELECT	10uF	20%	16V	C783	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C717	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V	C784	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C718	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V	C787	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C720	1-119-660-11	TANTAL. CHIP	4.7uF	20%	6.3V	C788	1-126-176-11	ELECT	220uF	20%	10V
C721	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C790	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C722	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	C791	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C723	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	< CONNECTOR >					
C724	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	* CN305	1-580-171-11	PIN, CONNECTOR (PC BOARD)	10P		
C725	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	* CN306	1-580-169-11	PIN, CONNECTOR (PC BOARD)	8P		
C726	1-104-509-11	CERAMIC CHIP	0.018uF	10%	16V	CN307	1-785-713-11	CONNECTOR, BOARD TO BOARD	4P		
C727	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V	* CN312	1-564-509-11	PLUG, CONNECTOR	6P		
C728	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	* CN313	1-564-520-11	PLUG, CONNECTOR	5P		
C729	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V	* CN401	1-564-519-11	PLUG, CONNECTOR	4P		
C730	1-124-257-00	ELECT	2.2uF	20%	50V	CN402	1-580-168-01	PIN, CONNECTOR (PC BOARD)	7P		
C731	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	CN404	1-580-168-11	PIN, CONNECTOR (PC BOARD)	7P		
C732	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN405	1-770-533-31	CONNECTOR, FFC/FPC	26P		
C733	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	CN406	1-568-852-11	CONNECTOR, FFC/FPC	9P		
C734	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN407	1-569-906-11	SOCKET, CONNECTOR	11P		
C735	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN408	1-580-168-11	PIN, CONNECTOR (PC BOARD)	7P		
C736	1-126-382-11	ELECT	100uF	20%	10V	CN409	1-770-516-31	CONNECTOR, FFC/FPC	8P		
C737	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	* CN701	1-779-466-11	CONNECTOR, FFC/FPC	16P		
C738	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	* CN702	1-580-167-11	PIN, CONNECTOR (PC BOARD)	6P		
C739	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	* CN704	1-580-163-11	PIN, CONNECTOR (PC BOARD)	2P		
C740	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	< DIODE >					
C745	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	D401	8-719-914-43	DIODE	DAN202K		
C746	1-162-957-11	CERAMIC CHIP	220PF	5%	50V	D402	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
C747	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	D405	8-719-988-61	DIODE	1SS355TE-17		
C748	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	D406	8-719-988-61	DIODE	1SS355TE-17		
C749	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D407	8-719-988-61	DIODE	1SS355TE-17		
C750	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	D701	8-719-988-61	DIODE	1SS355TE-17		
C751	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	D702	8-719-988-61	DIODE	1SS355TE-17		
C752	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D703	8-719-056-76	DIODE	UDZ-TE-17-3.6B		
C753	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D704	8-719-988-61	DIODE	1SS355TE-17		
C755	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	< FERRITE BEAD >					
C756	1-163-263-11	CERAMIC CHIP	330PF	5%	50V	FB101	1-216-295-00	METAL CHIP	0	5%	1/10W
C757	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB201	1-216-295-00	METAL CHIP	0	5%	1/10W
C758	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB301	1-216-295-00	METAL CHIP	0	5%	1/10W
C759	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB401	1-216-296-00	METAL CHIP	0	5%	1/8W
C760	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB402	1-469-125-21	FERRITE			
C761	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB403	1-500-445-21	FERRITE			
C762	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	FB404	1-469-125-21	FERRITE			
C763	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB405	1-500-445-21	FERRITE			
C764	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB406	1-500-445-21	FERRITE			
C765	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB407	1-469-125-21	FERRITE			
C767	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	FB408	1-500-445-21	FERRITE			
C768	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	FB409	1-469-125-21	FERRITE			
C770	1-124-584-00	ELECT	100uF	20%	10V	FB410	1-469-125-21	FERRITE			
C771	1-124-584-00	ELECT	100uF	20%	10V	FB411	1-500-445-21	FERRITE			
C773	1-124-233-11	ELECT	10uF	20%	16V	FB412	1-469-185-11	FERRITE			
C774	1-124-233-11	ELECT	10uF	20%	16V						
C775	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V						

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
FB413	1-469-185-11	FERRITE					L701	1-412-973-11	INDUCTOR	0.33uH			
FB414	1-500-445-21	FERRITE											
FB415	1-500-445-21	FERRITE							< TRANSISTOR >				
FB416	1-216-295-00	METAL CHIP	0	5%	1/10W		Q101	8-729-920-31	TRANSISTOR	DTC343TK			
FB417	1-469-125-21	FERRITE					Q102	8-729-920-31	TRANSISTOR	DTC343TK			
							Q103	8-729-920-31	TRANSISTOR	DTC343TK			
FB418	1-469-125-21	FERRITE					Q104	8-729-903-10	TRANSISTOR	FMW1			
FB419	1-469-125-21	FERRITE					Q106	8-729-920-31	TRANSISTOR	DTC343TK			
FB420	1-469-125-21	FERRITE											
FB421	1-469-125-21	FERRITE					Q107	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
FB422	1-469-125-21	FERRITE					Q201	8-729-920-31	TRANSISTOR	DTC343TK			
							Q202	8-729-920-31	TRANSISTOR	DTC343TK			
FB423	1-216-295-00	METAL CHIP	0	5%	1/10W		Q203	8-729-920-31	TRANSISTOR	DTC343TK			
FB424	1-500-445-21	FERRITE					Q204	8-729-903-10	TRANSISTOR	FMW1			
FB425	1-216-295-00	METAL CHIP	0	5%	1/10W								
FB426	1-216-864-11	METAL CHIP	0	5%	1/16W		Q206	8-729-920-31	TRANSISTOR	DTC343TK			
FB427	1-216-295-00	METAL CHIP	0	5%	1/10W		Q207	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
							Q301	8-729-920-41	TRANSISTOR	FMC3			
FB428	1-216-295-00	METAL CHIP	0	5%	1/10W		Q302	8-729-920-41	TRANSISTOR	FMC3			
FB429	1-216-295-00	METAL CHIP	0	5%	1/10W		Q303	8-729-920-41	TRANSISTOR	FMC3			
FB430	1-216-295-00	METAL CHIP	0	5%	1/10W								
FB431	1-216-295-00	METAL CHIP	0	5%	1/10W		Q304	8-729-027-24	TRANSISTOR	DTA114TKA-T146			
FB432	1-216-864-11	METAL CHIP	0	5%	1/16W		Q305	8-729-027-24	TRANSISTOR	DTA114TKA-T146			
							Q306	8-729-027-24	TRANSISTOR	DTA114TKA-T146			
FB433	1-216-295-00	METAL CHIP	0	5%	1/10W		Q311	8-729-920-41	TRANSISTOR	FMC3			
FB434	1-216-864-11	METAL CHIP	0	5%	1/16W		Q312	8-729-920-41	TRANSISTOR	FMC3			
FB701	1-216-864-11	METAL CHIP	0	5%	1/16W								
FB703	1-500-234-22	FERRITE					Q401	8-729-920-41	TRANSISTOR	FMC3			
FB704	1-216-295-00	METAL CHIP	0	5%	1/10W		Q402	8-729-922-62	TRANSISTOR	2SD1760F5-TLQ			
							Q403	8-729-920-41	TRANSISTOR	FMC3			
FB711	1-500-241-22	FERRITE					Q404	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
FB712	1-216-295-00	METAL CHIP	0	5%	1/10W		Q405	8-729-903-46	TRANSISTOR	2SB1132-P			
FB713	1-216-295-00	METAL CHIP	0	5%	1/10W								
FB714	1-216-295-00	METAL CHIP	0	5%	1/10W		Q406	8-729-903-10	TRANSISTOR	FMW1			
FB762	1-216-864-11	METAL CHIP	0	5%	1/16W		Q407	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
		< IC >					Q408	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
IC301	8-759-287-76	IC NJM2123M-T1					Q409	8-729-027-26	TRANSISTOR	DTA114YKA-T146			
IC302	8-759-636-55	IC M5218AFP					Q410	8-729-903-46	TRANSISTOR	2SB1132-P			
IC401	8-759-361-69	IC BA17805T											
IC402	8-759-486-73	IC XC62FP3302PR					Q411	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
IC403	8-759-493-53	IC S-81233SGUP-DQF-T1					Q412	8-729-027-46	TRANSISTOR	DTC114YKA-T146			
							Q413	8-729-903-46	TRANSISTOR	2SB1132-P			
IC404	8-759-572-25	IC XC61AN2702PR					Q701	8-729-101-07	TRANSISTOR	2SB798-DL			
IC405	8-752-903-56	IC CXP740096-026Q					Q702	8-729-027-29	TRANSISTOR	DTA123JKA-T146			
IC406	8-759-557-36	IC BU1924F-E2											
IC701	8-752-083-24	IC CXA2542AQ					Q703	8-729-922-62	TRANSISTOR	2SD1760F5-TLQ			
IC702	8-752-387-78	IC CXD3009Q							< RESISTOR >				
IC703	8-759-591-63	IC BA6998FP-E2					R101	1-216-845-11	METAL CHIP	100K	5%	1/16W	
							R102	1-216-097-91	RES,CHIP	100K	5%	1/10W	
		< JACK >					R103	1-216-845-11	METAL CHIP	100K	5%	1/16W	
							R104	1-216-864-11	METAL CHIP	0	5%	1/16W	
J301	1-785-368-11	JACK (♂)					R105	1-216-821-11	METAL CHIP	1K	5%	1/16W	
		< JUMPER RESISTOR >					R106	1-216-845-11	METAL CHIP	100K	5%	1/16W	
							R107	1-216-864-11	METAL CHIP	0	5%	1/16W	
JC404	1-216-296-00	METAL CHIP	0	5%	1/8W		R108	1-216-821-11	METAL CHIP	1K	5%	1/16W	
JC405	1-216-296-00	METAL CHIP	0	5%	1/8W		R109	1-216-230-00	RES,CHIP	22K	5%	1/8W	
JC406	1-216-296-00	METAL CHIP	0	5%	1/8W		R110	1-216-821-11	METAL CHIP	1K	5%	1/16W	
JC407	1-216-295-00	METAL CHIP	0	5%	1/10W								
							R111	1-216-025-91	RES,CHIP	100	5%	1/10W	
		< COIL >					R112	1-216-821-11	METAL CHIP	1K	5%	1/16W	
L301	1-410-993-42	INDUCTOR CHIP 1uH					R113	1-216-081-00	METAL CHIP	22K	5%	1/10W	
L302	1-410-993-42	INDUCTOR CHIP 1uH					R114	1-216-845-11	METAL CHIP	100K	5%	1/16W	
L303	1-410-993-42	INDUCTOR CHIP 1uH					R115	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
L401	1-414-170-21	INDUCTOR CHIP 100uH											
							R116	1-216-833-91	RES,CHIP	10K	5%	1/16W	

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W	R329	1-216-097-91	RES,CHIP	100K	5%	1/10W
R118	1-216-073-00	METAL CHIP	10K	5%	1/10W	R330	1-216-097-91	RES,CHIP	100K	5%	1/10W
R119	1-216-821-11	METAL CHIP	1K	5%	1/16W	R331	1-216-833-91	RES,CHIP	10K	5%	1/16W
R120	1-216-081-00	METAL CHIP	22K	5%	1/10W	R332	1-216-833-91	RES,CHIP	10K	5%	1/16W
R121	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R337	1-216-097-91	RES,CHIP	100K	5%	1/10W
R122	1-216-081-00	METAL CHIP	22K	5%	1/10W	R347	1-216-089-91	RES,CHIP	47K	5%	1/10W
R123	1-216-097-91	RES,CHIP	100K	5%	1/10W	R401	1-216-805-11	METAL CHIP	47	5%	1/16W
R124	1-216-097-91	RES,CHIP	100K	5%	1/10W	R402	1-216-041-00	METAL CHIP	470	5%	1/10W
R131	1-216-833-91	RES,CHIP	10K	5%	1/16W	R403	1-216-049-91	RES,CHIP	1K	5%	1/10W
R133	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	R404	1-216-839-11	METAL CHIP	33K	5%	1/16W
R134	1-216-832-11	METAL CHIP	8.2K	5%	1/16W	R405	1-216-833-91	RES,CHIP	10K	5%	1/16W
R135	1-216-089-91	RES,CHIP	47K	5%	1/10W	R406	1-216-821-11	METAL CHIP	1K	5%	1/16W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W	R407	1-216-049-91	RES,CHIP	1K	5%	1/10W
R137	1-216-864-11	METAL CHIP	0	5%	1/16W	R408	1-216-809-11	METAL CHIP	100	5%	1/16W
R139	1-216-821-11	METAL CHIP	1K	5%	1/16W	R409	1-216-833-91	RES,CHIP	10K	5%	1/16W
R140	1-216-821-11	METAL CHIP	1K	5%	1/16W	R410	1-216-833-91	RES,CHIP	10K	5%	1/16W
R141	1-216-864-11	METAL CHIP	0	5%	1/16W	R411	1-216-833-91	RES,CHIP	10K	5%	1/16W
R201	1-216-845-11	METAL CHIP	100K	5%	1/16W	R412	1-216-833-91	RES,CHIP	10K	5%	1/16W
R202	1-216-097-91	RES,CHIP	100K	5%	1/10W	R413	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R203	1-216-845-11	METAL CHIP	100K	5%	1/16W	R414	1-216-817-11	METAL CHIP	470	5%	1/16W
R204	1-216-864-11	METAL CHIP	0	5%	1/16W	R415	1-216-817-11	METAL CHIP	470	5%	1/16W
R205	1-216-821-11	METAL CHIP	1K	5%	1/16W	R416	1-216-833-91	RES,CHIP	10K	5%	1/16W
R206	1-216-845-11	METAL CHIP	100K	5%	1/16W	R417	1-216-821-11	METAL CHIP	1K	5%	1/16W
R207	1-216-864-11	METAL CHIP	0	5%	1/16W	R418	1-216-821-11	METAL CHIP	1K	5%	1/16W
R208	1-216-821-11	METAL CHIP	1K	5%	1/16W	R419	1-216-821-11	METAL CHIP	1K	5%	1/16W
R209	1-216-230-00	RES,CHIP	22K	5%	1/8W	R420	1-216-821-11	METAL CHIP	1K	5%	1/16W
R210	1-216-821-11	METAL CHIP	1K	5%	1/16W	R421	1-216-821-11	METAL CHIP	1K	5%	1/16W
R211	1-216-809-11	METAL CHIP	100	5%	1/16W	R422	1-216-821-11	METAL CHIP	1K	5%	1/16W
R212	1-216-821-11	METAL CHIP	1K	5%	1/16W	R423	1-216-821-11	METAL CHIP	1K	5%	1/16W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W	R424	1-216-821-11	METAL CHIP	1K	5%	1/16W
R214	1-216-845-11	METAL CHIP	100K	5%	1/16W	R425	1-216-821-11	METAL CHIP	1K	5%	1/16W
R215	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R426	1-216-821-11	METAL CHIP	1K	5%	1/16W
R216	1-216-833-91	RES,CHIP	10K	5%	1/16W	R427	1-216-821-11	METAL CHIP	1K	5%	1/16W
R217	1-216-073-00	METAL CHIP	10K	5%	1/10W	R428	1-216-833-91	RES,CHIP	10K	5%	1/16W
R218	1-216-073-00	METAL CHIP	10K	5%	1/10W	R429	1-216-821-11	METAL CHIP	1K	5%	1/16W
R219	1-216-821-11	METAL CHIP	1K	5%	1/16W	R430	1-216-821-11	METAL CHIP	1K	5%	1/16W
R220	1-216-081-00	METAL CHIP	22K	5%	1/10W	R431	1-216-821-11	METAL CHIP	1K	5%	1/16W
R221	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R432	1-216-821-11	METAL CHIP	1K	5%	1/16W
R222	1-216-081-00	METAL CHIP	22K	5%	1/10W	R433	1-216-821-11	METAL CHIP	1K	5%	1/16W
R223	1-216-097-91	RES,CHIP	100K	5%	1/10W	R434	1-216-821-11	METAL CHIP	1K	5%	1/16W
R224	1-216-097-91	RES,CHIP	100K	5%	1/10W	R435	1-216-841-11	METAL CHIP	47K	5%	1/16W
R231	1-216-833-91	RES,CHIP	10K	5%	1/16W	R436	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R233	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	R437	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R234	1-216-832-11	METAL CHIP	8.2K	5%	1/16W	R438	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R235	1-216-089-91	RES,CHIP	47K	5%	1/10W	R439	1-216-821-11	METAL CHIP	1K	5%	1/16W
R236	1-216-073-00	METAL CHIP	10K	5%	1/10W	R440	1-216-821-11	METAL CHIP	1K	5%	1/16W
R237	1-216-864-11	METAL CHIP	0	5%	1/16W	R441	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R239	1-216-821-11	METAL CHIP	1K	5%	1/16W	R442	1-216-049-91	RES,CHIP	1K	5%	1/10W
R240	1-216-821-11	METAL CHIP	1K	5%	1/16W	R443	1-216-817-11	METAL CHIP	470	5%	1/16W
R241	1-216-864-11	METAL CHIP	0	5%	1/16W	R444	1-216-817-11	METAL CHIP	470	5%	1/16W
R301	1-216-017-91	RES,CHIP	47	5%	1/10W	R445	1-216-821-11	METAL CHIP	1K	5%	1/16W
R306	1-216-017-91	RES,CHIP	47	5%	1/10W	R446	1-216-821-11	METAL CHIP	1K	5%	1/16W
R307	1-216-833-91	RES,CHIP	10K	5%	1/16W	R447	1-216-833-91	RES,CHIP	10K	5%	1/16W
R308	1-216-833-91	RES,CHIP	10K	5%	1/16W	R448	1-216-821-11	METAL CHIP	1K	5%	1/16W
R317	1-216-073-00	METAL CHIP	10K	5%	1/10W	R449	1-216-821-11	METAL CHIP	1K	5%	1/16W
R318	1-216-073-00	METAL CHIP	10K	5%	1/10W	R450	1-216-821-11	METAL CHIP	1K	5%	1/16W
R323	1-216-073-00	METAL CHIP	10K	5%	1/10W	R451	1-216-821-11	METAL CHIP	1K	5%	1/16W
R326	1-216-017-91	RES,CHIP	47	5%	1/10W						

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R452	1-216-833-91	RES,CHIP	10K	5%	1/16W	R706	1-216-847-11	METAL CHIP	150K	5%	1/16W
R453	1-216-821-11	METAL CHIP	1K	5%	1/16W	R710	1-218-273-11	RES,CHIP	510K	5%	1/16W
R454	1-216-817-11	METAL CHIP	470	5%	1/16W	R711	1-216-847-11	METAL CHIP	150K	5%	1/16W
R455	1-216-817-11	METAL CHIP	470	5%	1/16W	R712	1-216-845-11	METAL CHIP	100K	5%	1/16W
R456	1-216-821-11	METAL CHIP	1K	5%	1/16W	R713	1-216-841-11	METAL CHIP	47K	5%	1/16W
R457	1-216-041-00	METAL CHIP	470	5%	1/10W	R714	1-216-841-11	METAL CHIP	47K	5%	1/16W
R458	1-216-041-00	METAL CHIP	470	5%	1/10W	R715	1-216-847-11	METAL CHIP	150K	5%	1/16W
R459	1-216-833-91	RES,CHIP	10K	5%	1/16W	R716	1-216-845-11	METAL CHIP	100K	5%	1/16W
R460	1-216-821-11	METAL CHIP	1K	5%	1/16W	R718	1-216-817-11	RES,CHIP	470	5%	1/16W
R461	1-216-821-11	METAL CHIP	1K	5%	1/16W	R719	1-216-041-00	METAL CHIP	470	5%	1/10W
R462	1-216-821-11	METAL CHIP	1K	5%	1/16W	R720	1-216-817-11	METAL CHIP	470	5%	1/16W
R463	1-216-809-11	METAL CHIP	100	5%	1/16W	R721	1-216-845-11	METAL CHIP	100K	5%	1/16W
R464	1-216-821-11	METAL CHIP	1K	5%	1/16W	R722	1-216-845-11	METAL CHIP	100K	5%	1/16W
R465	1-216-809-11	METAL CHIP	100	5%	1/16W	R723	1-216-845-11	METAL CHIP	100K	5%	1/16W
R466	1-216-837-11	METAL CHIP	22K	5%	1/16W	R724	1-216-845-11	METAL CHIP	100K	5%	1/16W
R467	1-216-817-11	METAL CHIP	470	5%	1/16W	R725	1-216-845-11	METAL CHIP	100K	5%	1/16W
R468	1-216-833-91	RES,CHIP	10K	5%	1/16W	R726	1-216-845-11	METAL CHIP	100K	5%	1/16W
R470	1-216-821-11	METAL CHIP	1K	5%	1/16W	R731	1-216-835-11	METAL CHIP	15K	5%	1/16W
R471	1-216-049-91	RES,CHIP	1K	5%	1/10W	R732	1-216-839-11	METAL CHIP	33K	5%	1/16W
R472	1-216-839-11	METAL CHIP	33K	5%	1/16W	R733	1-216-845-11	METAL CHIP	100K	5%	1/16W
R473	1-216-049-91	RES,CHIP	1K	5%	1/10W	R734	1-216-001-00	METAL CHIP	10	5%	1/10W
R474	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R735	1-216-833-91	RES,CHIP	10K	5%	1/16W
R475	1-216-821-11	METAL CHIP	1K	5%	1/16W	R741	1-216-849-11	METAL CHIP	220K	5%	1/16W
R476	1-216-821-11	METAL CHIP	1K	5%	1/16W	R742	1-216-847-11	METAL CHIP	150K	5%	1/16W
R477	1-216-833-91	RES,CHIP	10K	5%	1/16W	R743	1-216-847-11	METAL CHIP	150K	5%	1/16W
R478	1-216-821-11	METAL CHIP	1K	5%	1/16W	R745	1-216-851-11	METAL CHIP	330K	5%	1/16W
R479	1-216-821-11	METAL CHIP	1K	5%	1/16W	R750	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R480	1-216-821-11	METAL CHIP	1K	5%	1/16W	R751	1-216-835-11	METAL CHIP	15K	5%	1/16W
R481	1-216-821-11	METAL CHIP	1K	5%	1/16W	R752	1-216-839-11	METAL CHIP	33K	5%	1/16W
R482	1-216-837-11	METAL CHIP	22K	5%	1/16W	R753	1-216-821-11	METAL CHIP	1K	5%	1/16W
R483	1-216-841-11	METAL CHIP	47K	5%	1/16W	R754	1-216-837-11	METAL CHIP	22K	5%	1/16W
R484	1-216-841-11	METAL CHIP	47K	5%	1/16W	R755	1-216-841-11	METAL CHIP	47K	5%	1/16W
R485	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R756	1-216-833-91	RES,CHIP	10K	5%	1/16W
R486	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R758	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R487	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R760	1-216-097-91	RES,CHIP	100K	5%	1/10W
R488	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R762	1-216-853-11	METAL CHIP	470K	5%	1/16W
R489	1-216-085-00	METAL CHIP	33K	5%	1/10W	R763	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R490	1-216-081-00	METAL CHIP	22K	5%	1/10W	R764	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R491	1-216-837-11	METAL CHIP	22K	5%	1/16W	R765	1-216-833-91	RES,CHIP	10K	5%	1/16W
R492	1-216-839-11	METAL CHIP	33K	5%	1/16W	R766	1-216-857-11	METAL CHIP	1M	5%	1/16W
R493	1-216-821-11	METAL CHIP	1K	5%	1/16W	R767	1-216-833-91	RES,CHIP	10K	5%	1/16W
R494	1-216-821-11	METAL CHIP	1K	5%	1/16W	R768	1-216-833-91	RES,CHIP	10K	5%	1/16W
R495	1-216-821-11	METAL CHIP	1K	5%	1/16W	R769	1-216-041-00	METAL CHIP	470	5%	1/10W
R496	1-216-864-11	METAL CHIP	0	5%	1/16W	R770	1-216-821-11	METAL CHIP	1K	5%	1/16W
R497	1-216-073-00	METAL CHIP	10K	5%	1/10W	R771	1-216-864-11	METAL CHIP	0	5%	1/16W
R498	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R772	1-216-033-00	METAL CHIP	220	5%	1/10W
R499	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R775	1-216-864-11	METAL CHIP	0	5%	1/16W
R500	1-216-296-00	METAL CHIP	0	5%	1/8W	R776	1-216-073-00	METAL CHIP	10K	5%	1/10W
R501	1-216-833-91	RES,CHIP	10K	5%	1/16W	R777	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-833-91	RES,CHIP	10K	5%	1/16W	R778	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-216-833-91	RES,CHIP	10K	5%	1/16W	R780	1-216-821-11	METAL CHIP	1K	5%	1/16W
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W	R781	1-216-073-00	METAL CHIP	10K	5%	1/10W
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W	R786	1-216-295-00	METAL CHIP	0	5%	1/10W
R506	1-216-821-11	METAL CHIP	1K	5%	1/16W	R787	1-216-821-11	METAL CHIP	1K	5%	1/16W
R507	1-216-821-11	METAL CHIP	1K	5%	1/16W	R788	1-216-821-11	METAL CHIP	1K	5%	1/16W
R700	1-216-835-11	METAL CHIP	15K	5%	1/16W	R789	1-216-809-11	METAL CHIP	100	5%	1/16W
R701	1-216-833-91	RES,CHIP	10K	5%	1/16W	R790	1-216-049-91	RES,CHIP	1K	5%	1/10W
R703	1-216-855-11	METAL CHIP	680K	5%	1/16W						

MAIN

MOTOR

POWER

Ref. No.	Part No.	Description			Remark
R791	1-216-821-11	METAL CHIP	1K	5%	1/16W
R792	1-216-809-11	METAL CHIP	100	5%	1/16W
R793	1-216-821-11	METAL CHIP	1K	5%	1/16W
R794	1-216-817-11	METAL CHIP	470	5%	1/16W
R795	1-216-813-11	METAL CHIP	220	5%	1/16W
R796	1-216-821-11	METAL CHIP	1K	5%	1/16W
R797	1-216-821-11	METAL CHIP	1K	5%	1/16W
R798	1-216-821-11	METAL CHIP	1K	5%	1/16W
R799	1-216-821-11	METAL CHIP	1K	5%	1/16W
< VIBRATOR >					
X401	1-781-050-21	VIBRATOR, CERAMIC (8MHz)			
X402	1-767-697-11	VIBRATOR, CRYSTAL (32kHz)			
X403	1-760-556-11	VIBRATOR, CRYSTAL (4.332MHz)			
X701	1-767-226-11	VIBRATOR, CRYSTAL (16.9344MHz)			

*	A-3323-155-A	MOTOR BOARD, COMPLETE			

< CAPACITOR >					
C789	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C795	1-126-925-11	ELECT	470uF	20%	10V
C796	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C797	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
< CONNECTOR >					
* CN712	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P			
< DIODE >					
D761	8-719-988-61	DIODE	1SS355TE-17		
D762	8-719-988-61	DIODE	1SS355TE-17		
< IC >					
IC711	8-759-565-65	IC	BA6289F-E2		
< COIL >					
L711	1-414-743-21	INDUCTOR	47uH		
L712	1-414-743-21	INDUCTOR	47uH		
< TRANSISTOR >					
Q761	8-729-028-66	TRANSISTOR	DTC115EKA-T146		
Q762	8-729-027-26	TRANSISTOR	DTA114YKA-T146		
Q763	8-729-027-46	TRANSISTOR	DTC114YKA-T146		
Q764	8-729-903-46	TRANSISTOR	2SB1132-P		
Q765	8-729-027-46	TRANSISTOR	DTC114YKA-T146		
Q766	8-729-027-46	TRANSISTOR	DTC114YKA-T146		
< RESISTOR >					
R728	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R744	1-216-081-00	METAL CHIP	22K	5%	1/10W
R746	1-216-073-00	METAL CHIP	10K	5%	1/10W
R747	1-216-081-00	METAL CHIP	22K	5%	1/10W
R748	1-216-079-00	METAL CHIP	18K	5%	1/10W
R749	1-216-079-00	METAL CHIP	18K	5%	1/10W
R759	1-216-089-91	RES,CHIP	47K	5%	1/10W
△ R761	1-212-954-11	FUSIBLE	6.8	5%	1/2W F
R779	1-216-041-00	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description	Remark		
< SWITCH >					
S761	1-572-126-21	SWITCH, PUSH (1 KEY) (OPEN)			
S762	1-572-126-21	SWITCH, PUSH (1 KEY) (CLOSE)			

*	1-671-313-21	POWER BOARD			

	1-533-217-31	HOLDER, FUSE			
*	3-028-880-01	HEAT SINK (DIODE)			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
< CAPACITOR >					
C901	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C902	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C903	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C904	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C905	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C906	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C907	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C908	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C909	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C910	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C911	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C912	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C913	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C914	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C916	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C917	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
< CONNECTOR >					
* CN901	1-564-522-11	PLUG, CONNECTOR 7P			
* CN902	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P			
* CN904	1-564-519-11	PLUG, CONNECTOR 4P			
< DIODE >					
D901	8-719-302-38	DIODE RBV-602-01			
D903	8-719-510-53	DIODE D4SB60L			
D904	8-719-914-43	DIODE DAN202K			
D905	8-719-970-02	DIODE 1SR139-400			
D906	8-719-970-02	DIODE 1SR139-400			
D907	8-719-970-02	DIODE 1SR139-400			
D908	8-719-970-02	DIODE 1SR139-400			
< FUSE >					
△ F901	1-532-467-51	FUSE (T0.315AL/250V)			
△ F902	1-532-505-51	FUSE (T5AL/250V)			
△ F903	1-532-499-51	FUSE (T0.4AL/250V)			
△ F904	1-532-388-51	FUSE (T2AL/250V)			
< JACK >					
△ J901	1-526-838-11	INLET, AC 2P (∼ AC IN)			
< RESISTOR >					
R901	1-216-073-00	METAL CHIP	10K	5%	1/10W
R902	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< TRANSFORMER >				C36	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
△ T901	1-433-781-11	TRANSFORMER, POWER		C37	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
△ T902	1-433-630-11	TRANSFORMER, LINE FILTER (LFT)		C38	1-164-505-11	CERAMIC CHIP 2.2uF	16V
*****				C39	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
* 1-661-774-11 SW BOARD				C40	1-126-934-11	ELECT 220uF 20%	16V
*****				C41	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
< CONNECTOR >				C42	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
CN601	1-770-698-11	CONNECTOR, FFC/FPC 15P		C43	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
CN602	1-778-638-21	PIN, CONNECTOR (PC BOARD) 2P		C44	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
CN603	1-778-638-21	PIN, CONNECTOR (PC BOARD) 2P		C45	1-163-133-00	CERAMIC CHIP 470PF 5%	50V
< SWITCH >				C46	1-164-345-11	CERAMIC CHIP 0.082uF 10%	25V
S681	1-572-467-61	SWITCH, PUSH (1 KEY) (LIMIT IN)		C47	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
S682	1-692-377-31	SWITCH, PUSH (1 KEY) (REFLECT)		C48	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
S683	1-692-847-21	SWITCH, PUSH (1 KEY) (PROTECT)		C49	1-126-934-11	ELECT 220uF 20%	10V
S685	1-572-467-61	SWITCH, PUSH (1 KEY) (CHUCKING IN)		C50	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
S686	1-762-621-21	SWITCH, PUSH (1 KEY) (PACK OUT)		C51	1-163-263-11	CERAMIC CHIP 330PF 5%	50V
S687	1-572-688-11	SWITCH, PUSH (1 KEY) (PB POSITION)		C53	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
S688	1-762-621-21	SWITCH, PUSH (1 KEY) (REC POSITION)		C54	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
*****				C55	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
* A-3323-154-A TUNER BOARD, COMPLETE				C56	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
*****				C58	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
< CAPACITOR >				C61	1-162-957-11	CERAMIC CHIP 220PF 5%	50V
C1	1-163-243-11	CERAMIC CHIP 47PF 5%	50V	C62	1-163-205-00	CERAMIC CHIP 0.001uF 5%	50V
C2	1-163-113-00	CERAMIC CHIP 68PF 5%	50V	C63	1-163-205-00	CERAMIC CHIP 0.001uF 5%	50V
C3	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C64	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C4	1-163-132-00	CERAMIC CHIP 430PF 5%	50V	C65	1-126-964-11	ELECT 10uF 20%	50V
C5	1-163-263-11	CERAMIC CHIP 330PF 5%	50V	C67	1-163-243-11	CERAMIC CHIP 47PF 5%	50V
C6	1-163-231-11	CERAMIC CHIP 15PF 5%	50V	C68	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C7	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C71	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C8	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	< FILTER >			
C13	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	CF1	1-579-762-11	VIBRATOR, CERAMIC	
C14	1-162-959-11	CERAMIC CHIP 330PF 5%	50V	CF2	1-781-407-11	FILTER, CERAMIC	
C15	1-163-259-91	CERAMIC CHIP 220PF 5%	50V	CF3	1-781-407-11	FILTER, CERAMIC	
C16	1-163-263-11	CERAMIC CHIP 330PF 5%	50V	CF4	1-781-407-11	FILTER, CERAMIC	
C17	1-164-344-11	CERAMIC CHIP 0.068uF 10%	25V	CF5	1-760-125-11	DISCRIMINATOR, CERAMIC	
C18	1-164-345-11	CERAMIC CHIP 0.082uF 10%	25V	< COMPOSITION CIRCUIT BLOCK >			
C19	1-126-964-11	ELECT 10uF 20%	50V	CFT1	1-233-885-11	ENCAPSULATED COMPONENT (MW/LW IF)	
C20	1-126-963-11	ELECT 4.7uF 20%	50V	< TRIMMER >			
C21	1-104-665-11	ELECT 100uF 20%	10V	CT1	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF (LW TRACKING)	
C22	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	CT2	1-141-410-11	CAP, ADJ 10PF (MW TRACKING)	
C23	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	CT3	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF (LW FREQUENCY COVERAGE)	
C24	1-163-986-00	CERAMIC CHIP 0.027uF 10%	25V	CT4	1-141-410-11	CAP, ADJ 10PF (MW FREQUENCY COVERAGE)	
C25	1-163-986-00	CERAMIC CHIP 0.027uF 10%	25V	< DIODE >			
C26	1-126-960-11	ELECT 1uF 20%	50V	D1	8-719-049-75	DIODE KV1520TL00	
C27	1-126-960-11	ELECT 1uF 20%	50V	D4	8-719-988-61	DIODE 1SS355TE-17	
C28	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	D5	8-719-988-61	DIODE 1SS355TE-17	
C29	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	D6	8-719-988-61	DIODE 1SS355TE-17	
C30	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	D7	8-719-988-61	DIODE 1SS355TE-17	
C31	1-163-227-11	CERAMIC CHIP 10PF 0.5PF	50V	D8	8-719-988-61	DIODE 1SS355TE-17	
C32	1-163-227-11	CERAMIC CHIP 10PF 0.5PF	50V	D9	8-719-988-61	DIODE 1SS355TE-17	
C33	1-137-194-91	FILM 0.47uF 5%	50V	D10	8-719-988-61	DIODE 1SS355TE-17	
C34	1-126-935-11	ELECT 470uF 20%	6.3V	D11	8-719-988-61	DIODE 1SS355TE-17	
C35	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	D12	8-719-988-61	DIODE 1SS355TE-17	

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TUNER

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
< FERRITE BEAD >													
							R21	1-216-017-91	RES,CHIP	47	5%	1/10W	
							R22	1-216-041-00	METAL CHIP	470	5%	1/10W	
FB1	1-414-598-11	INDUCTOR CHIP					R23	1-216-049-91	RES,CHIP	1K	5%	1/10W	
FB2	1-414-598-11	INDUCTOR CHIP					R25	1-216-023-00	METAL CHIP	82	5%	1/10W	
FB4	1-414-598-11	INDUCTOR CHIP					R26	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
FB5	1-414-598-11	INDUCTOR CHIP					R27	1-216-837-11	METAL CHIP	22K	5%	1/16W	
FB6	1-414-598-11	INDUCTOR CHIP					R28	1-216-833-91	RES,CHIP	10K	5%	1/16W	
FB7	1-414-598-11	INDUCTOR CHIP											
FB9	1-216-295-00	METAL CHIP	0	5%	1/10W		R29	1-216-821-11	METAL CHIP	1K	5%	1/16W	
< IC >													
IC1	8-759-386-02	IC TA2008AN					R30	1-216-047-91	RES,CHIP	820	5%	1/10W	
IC2	8-759-483-40	IC LC72137M-TLM					R31	1-216-073-00	METAL CHIP	10K	5%	1/10W	
< JUMPER RESISTOR >													
JC1	1-216-295-00	METAL CHIP	0	5%	1/10W		R33	1-216-073-00	METAL CHIP	10K	5%	1/10W	
JC5	1-216-295-00	METAL CHIP	0	5%	1/10W		R35	1-216-049-91	RES,CHIP	1K	5%	1/10W	
JC6	1-216-295-00	METAL CHIP	0	5%	1/10W								
JC7	1-216-295-00	METAL CHIP	0	5%	1/10W		R36	1-216-821-11	METAL CHIP	1K	5%	1/16W	
< COIL >													
L1	1-414-170-11	INDUCTOR CHIP 100uH					R37	1-216-833-91	RES,CHIP	10K	5%	1/16W	
L2	1-410-993-11	INDUCTOR CHIP 1uH					R38	1-216-833-91	RES,CHIP	10K	5%	1/16W	
L3	1-416-129-11	COIL, LW ANT (LW TRACKING)					R39	1-216-821-11	METAL CHIP	1K	5%	1/16W	
L4	1-416-991-11	COIL, AM ANT (MW TRACKING)					R40	1-216-821-11	METAL CHIP	1K	5%	1/16W	
L5	1-411-959-11	COIL, AM OSC (MW FREQUENCY COVERAGE)					R41	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
							R42	1-216-809-11	METAL CHIP	100	5%	1/16W	
							R43	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
							R46	1-216-864-11	METAL CHIP	0	5%	1/16W	
							R47	1-216-864-11	METAL CHIP	0	5%	1/16W	
							R48	1-216-841-11	METAL CHIP	47K	5%	1/16W	
							R49	1-216-841-11	METAL CHIP	47K	5%	1/16W	
							R50	1-216-841-11	METAL CHIP	47K	5%	1/16W	
							R51	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
L9	1-233-306-31	ENCAPSULATED COMPONENT (FM IF)					R52	1-216-821-11	METAL CHIP	1K	5%	1/16W	
L10	1-500-284-21	INDUCTOR CHIP											
< TRANSISTOR >													
Q3	8-729-119-32	TRANSISTOR 2SK193					R53	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
Q4	8-729-920-31	TRANSISTOR DTC343TK					R54	1-216-009-91	RES,CHIP	22	5%	1/10W	
Q5	8-729-920-38	TRANSISTOR 2SC2059K-N					R55	1-216-841-11	METAL CHIP	47K	5%	1/16W	
Q6	8-729-931-02	TRANSISTOR 2SC2413KQ					R57	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
Q7	8-729-120-28	TRANSISTOR 2SC1623-L5L6					R58	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
							R59	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
							R61	1-216-864-11	METAL CHIP	0	5%	1/16W	
							R62	1-216-295-00	METAL CHIP	0	5%	1/10W	
Q8	1-801-806-11	TRANSISTOR DTC144EKA-T146					R63	1-216-017-91	RES,CHIP	47	5%	1/10W	
Q9	8-729-904-07	TRANSISTOR FMG2					R64	1-216-295-00	METAL CHIP	0	5%	1/10W	
Q10	8-729-920-31	TRANSISTOR DTC343TK											
Q11	8-729-920-41	TRANSISTOR FMC3					R65	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
Q12	8-729-039-73	TRANSISTOR FMA5A-T148					R66	1-216-049-91	METAL CHIP	1K	5%	1/10W	
							R67	1-216-841-11	METAL CHIP	47K	5%	1/16W	
Q13	8-729-901-04	TRANSISTOR DTA114EK					< TERMINAL >						
Q14	8-729-931-02	TRANSISTOR 2SC2413KQ											
Q15	8-729-920-31	TRANSISTOR DTC343TK					TB1	1-537-489-21	TERMINAL BOARD (ANT) (FM EXT ANTENNA, MW/LW ANTENNA)				
< RESISTOR >													
R2	1-216-037-00	METAL CHIP	330	5%	1/10W		< TUNER UNIT >						
R3	1-216-049-91	RES,CHIP	1K	5%	1/10W								
R4	1-216-057-00	METAL CHIP	2.2K	5%	1/10W		* TU1	1-693-378-11	TUNER UNIT				
R5	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		< VIBRATOR >						
R6	1-216-073-00	METAL CHIP	10K	5%	1/10W								
R7	1-216-097-91	RES,CHIP	100K	5%	1/10W		X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz)				
R8	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		*****						
R9	1-216-077-00	METAL CHIP	15K	5%	1/10W								
R16	1-216-105-91	RES,CHIP	220K	5%	1/10W		MISCELLANEOUS						
R17	1-216-059-00	METAL CHIP	2.7K	5%	1/10W		*****						
R18	1-216-049-91	RES,CHIP	1K	5%	1/10W		2	1-533-217-31	HOLDER, FUSE				
R19	1-216-081-00	METAL CHIP	22K	5%	1/10W		64	1-410-397-21	FERRITE BEAD INDUCTOR				
R20	1-216-825-11	METAL CHIP	2.2K	5%	1/16W		114	1-783-958-11	WIRE, PARALLEL (FFC) (11 CORE)				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
115	1-783-957-11	WIRE, PARALLEL (FFC) (8 CORE)		#3	7-627-852-28	+P 1.7X3	
116	1-783-956-11	WIRE, PARALLEL (FFC) (9 CORE)		#4	7-685-133-19	SCREW +P 2.6X6 TYPE2 SLIT	
				#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
117	1-783-960-11	WIRE, PARALLEL (FFC) (26 CORE)		#6	7-685-850-01	SCREW +BVTT 2X3 (S)	
* 122	1-562-327-00	SOCKET, CONNECTOR 3P		#7	7-685-851-04	SCREW +BVTT 2X4 (S)	
151	1-783-955-11	WIRE, PARALLEL (FFC) (16 CORE)		#8	7-685-872-09	SCREW +BVTT 3X8 (S)	
159	1-452-732-11	MAGNET		#9	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
203	1-783-961-11	WIRE, PARALLEL (FFC) (19 CORE)		#10	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
				#11	7-685-651-79	SCREW +BVTP 3X20 TYPE2 N-S	
211	1-660-966-11	OP RALAY FLEXIBLE BOARD		#12	7-685-871-09	SCREW +BVTT 3X6 (S)	
212	1-777-517-11	WIRE, PARALLEL (15 CORE)		#13	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
214	1-783-962-11	WIRE, PARALLEL (FFC) (29 CORE)		#14	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S	
△ 267	8-583-028-02	OPTICAL PICK-UP KMS-260A		#15	7-621-773-86	SCREW +B 2.6X4	
△ 304	8-848-483-05	OPTICAL PICK-UP KSS-213C		#16	7-621-772-00	SCREW +B 2X3	
				#17	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
305	X-2626-202-1	MOTOR SHASSIS ASSY(MB) (INCLUDING M702)(SPINDLE)		#18	7-685-661-79	SCREW +BVTP 4X12 TYPE2 N-S	
ANT1	1-754-023-11	ANTENNA, TELESCOPIC		#19	7-623-508-01	LUG, 3	
D901	8-719-302-38	DIODE RBV-602-01		#20	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
△ F901	1-532-467-51	FUSE (T0.315AL/250V)					
△ F902	1-532-505-51	FUSE (T5AL/250V)					
△ F903	1-532-499-51	FUSE (T0.4AL/250V)					
△ F904	1-532-388-51	FUSE (T2AL/250V)					
HR901	1-500-396-11	HEAD, OVER WRITE					
LCD1	1-803-283-11	LCD UNIT					
M701	X-2625-769-1	MOTOR GEAR ASSY (MB) (INCLUDING GEAR) (SLED)					
M703	1-763-224-11	MOTOR, DC (DOOR OPEN/CLOSE)					
M901	A-4672-135-A	MOTOR ASSY, SPINDLE (SPINDLE)					
M902	A-4672-133-A	MOTOR ASSY, SLED (SLED) (INCLUDING GEAR)					
M903	A-4672-134-A	MOTOR ASSY, LOADING (LOADING) (INCLUDING GEAR)					
SP301	1-505-829-11	SPEAKER (8cm) (L-CH)					
SP302	1-529-130-11	SPEAKER (8cm) (R-CH)					
△ T901	1-433-781-11	TRANSFORMER, POWER					

ACCESSORIES & PACKING MATERIALS							

	1-501-374-11	ANTENNA, LOOP					
△	1-769-412-13	CORD, POWER					
△	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)					
	3-704-222-11	LABEL, SERIAL NUMBER (PRINTER)					
	3-864-598-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH)					
	3-864-598-21	MANUAL, INSTRUCTION (FRENCH,GERMAN) (AEP, Tourist)					
	3-864-598-31	MANUAL, INSTRUCTION (DUTCH, PORTUGUESE) (AEP, Tourist)					
	3-864-598-41	MANUAL, INSTRUCTION (SWEDISH, FINNISH) (AEP, Tourist)					
	3-864-598-51	MANUAL, INSTRUCTION (ITALIAN) (AEP, Tourist)					
	8-917-663-90	REMOTE COMMANDER RMT-CM50AD					
	4-991-047-01	LID, BATTERY CASE (FOR RMT-CM50AD)					

HARDWARE LIST							

#1	7-627-552-27	SCREW,PRECISION +P 1.7X2					
#2	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3					

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